The Life and Life Work of J. N. Tata

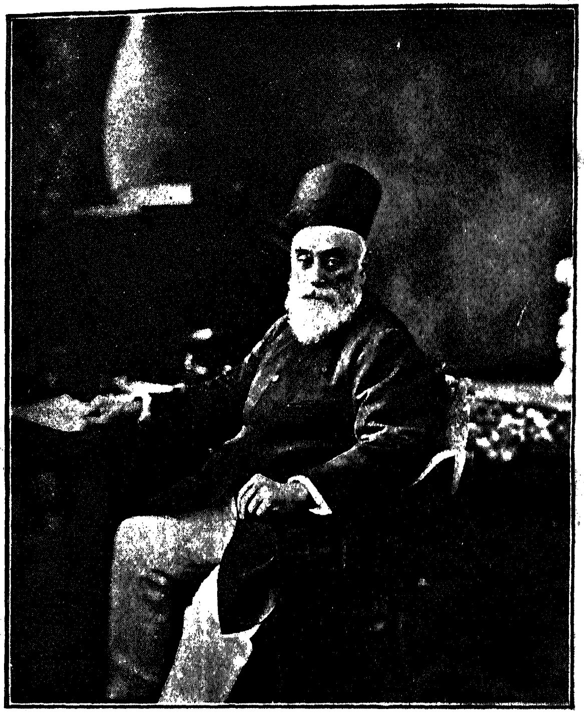
M. R. JAYAKAR
MALABAR HILL
BOMBAY

BY

D. E. WACHA

SECOND EDITION

MADRAS
GANESH & Co., PUBLISHERS



J. N. TATA.

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THE CAMBRIDGE PRESS MADRAS

M. R. JAYAKAR
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First Edition	December 1914
Second Edition	February 1915

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JAYAKAR
MALABAR HILL
BOMBAY

FOREWORD.

THE name of the late Mr. Jamsetji N. Tata is a household word in India. It is intimately associated with Science and Industrialism the greater advancement of which he had incessantly striven to promote with the great wealth at his command and with that energy, perseverance and singleness of purpose which were the marked traits of his character. As such he has already inscribed his name on the pages of Indian history as one of the greatest sons of India. To me, who had intimately known him, it is a source of peculiar pleasure to have been recently requested by Messrs. Ganesh & Co., the well-known publishers of Madras, to write a brief narrative of his life and life work for popular appreciation. This booklet is the result which, I need hardly say, has been to me a labour of love.

BOMBAY. D. E. WACHA.

NOTE TO THE SECOND EDITION.

I have availed myself of the opportunity offered by the publication of this second edition to add a chapter illustrative of the views Mr. Tata had entertained on the still burning problem of factory labour and on important public questions relating to irrigation, agriculture, land revenue, currency and so forth. I have also made clear the fact so little known to the public, that Mr. Tata was as keen and robust in matters political as he was courageous and enterprising in matters industrial.

D. E. WACHA.

THE

Tata Hydro-Electric Power Supply Co.,

LIMITED.

Board of Directors.

Chairman.

Sir D. J. Tata, Kt.

Directors.

Sir Sassoon David, Bart.

Ratan Tata, Esq.

Sir Shapurji B. Broacha, Kt.

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The Hon'ble Mr. Lalubhai Samaldas, C.I.E.

Narottam Morarjee Goculdas, Esq.

R. D. Tata, Esq.

A. N. Datar, Esq.

M. A. Tana, Esq.

H. J. Bhabha, Esq.

A. J. Bilimoria, Esq.

Character of the Works.

THE scheme comprises four distinct operations—the storage of the rainfall on the Ghats, the transfer of the water to the foot of the Ghats, the conversion of this hydraulic energy into electrical energy and its transmission to Bombay ; and the conversion of the electrical energy into mechanical energy at the mills.

The rainfall is stored in three lakes at Lanavla, Walhwan and Shrawata, whence it is conveyed in masonry canals to the Forebay, or receiving reservoir, above the Reversing Station on the G. I. P. Railway. Pipes fixed in the dam of the Forebay carry the water to the Power House at the foot of the Ghats, 13,000 feet distant and 1,725 feet below the level of the Forebay. In falling from this height the water developes a pressure of 750 lbs. per square inch, and with this force drives the Turbines or water-wheels. The Turbines are coupled direct to the Electric Generators, so the revolutions of the Turbines turn the Generators, which generate electric energy at a pressure of 5,000 volts. To secure economy in transmission to Bombay the pressure is raised, by being passed through static transformers to 100,000 volts and at this pressure the current is conveyed along the Transmission Line, 43 miles in length, to Parel. At the Receiving Station the pressure is reduced to 6,600 volts ; the current is then carried in underground cables to the mills where the pressure is further reduced to 2,200 volts, and passes to the mill motors, coupled to the shafting actuating the mill machinery, and in this way is reconverted into mechanical energy. This, in brief, is the cycle of operations whereby the rainfall of a portion of the Ghats is collected and stored, first converted into mechanical energy, then into electrical energy, and

back again to mechanical energy in the mills where it is available, whenever needed throughout the year.

Storage capacity of the lakes 10,520,000,000 cubic feet.

Quantity of masonry in the dams, roughly 25,000,000 cubic feet.

Length of tunnel between Shrawata and Walhwan lakes, over 5,000 feet.

Water capacity of the ducts 120,000 horse-power; length roughly 24,500 feet.

Length of Pipe Line 13,000 feet, falling in that distance 1,725 feet.

Each main Turbine is equal to 13,750 horse-power.

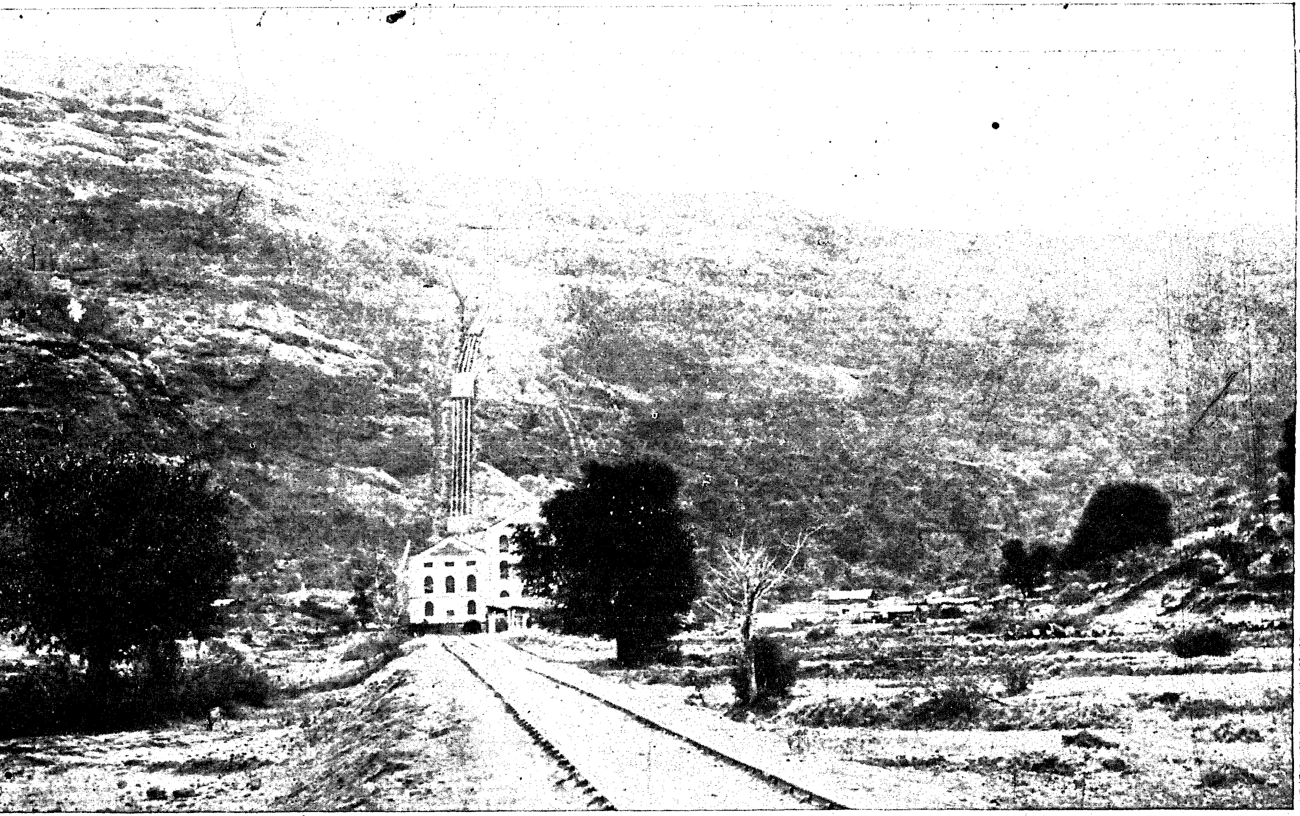
There are five Turbines, three more will be added so that when the Power Station is complete, it will contain 110,000 horse-power.

The Receiving Station will be arranged to deal with all the power generated.

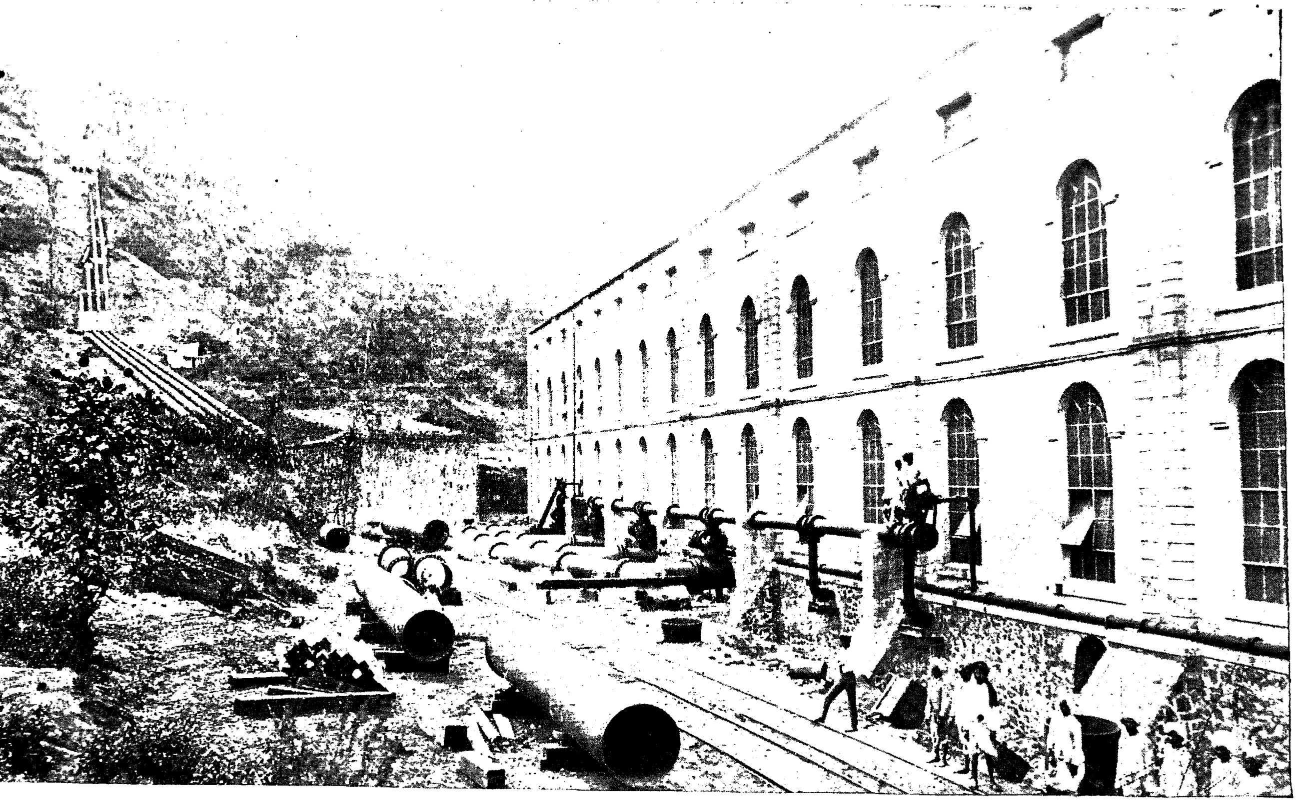
Contracts have already been entered into for the supply of approximately 50,000 horse-power to 37 consumers in Bombay.

The complete electric equipment for driving the machinery in the mills, in the majority of cases, is provided by the Company. The price for energy, including the supply and upkeep of the electric equipment, is 0·55 of an anna per unit; without the electric equipment 0·50.

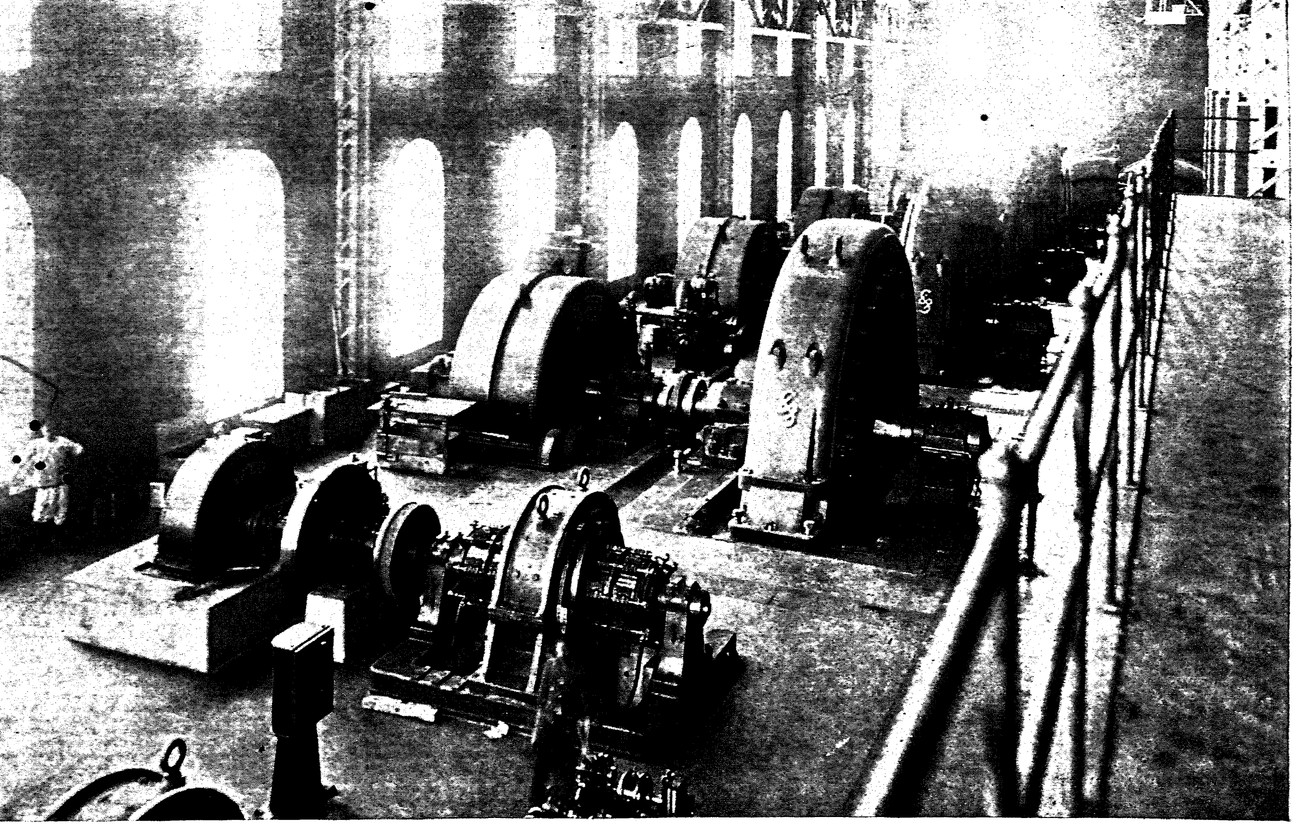
J. N. TATA.



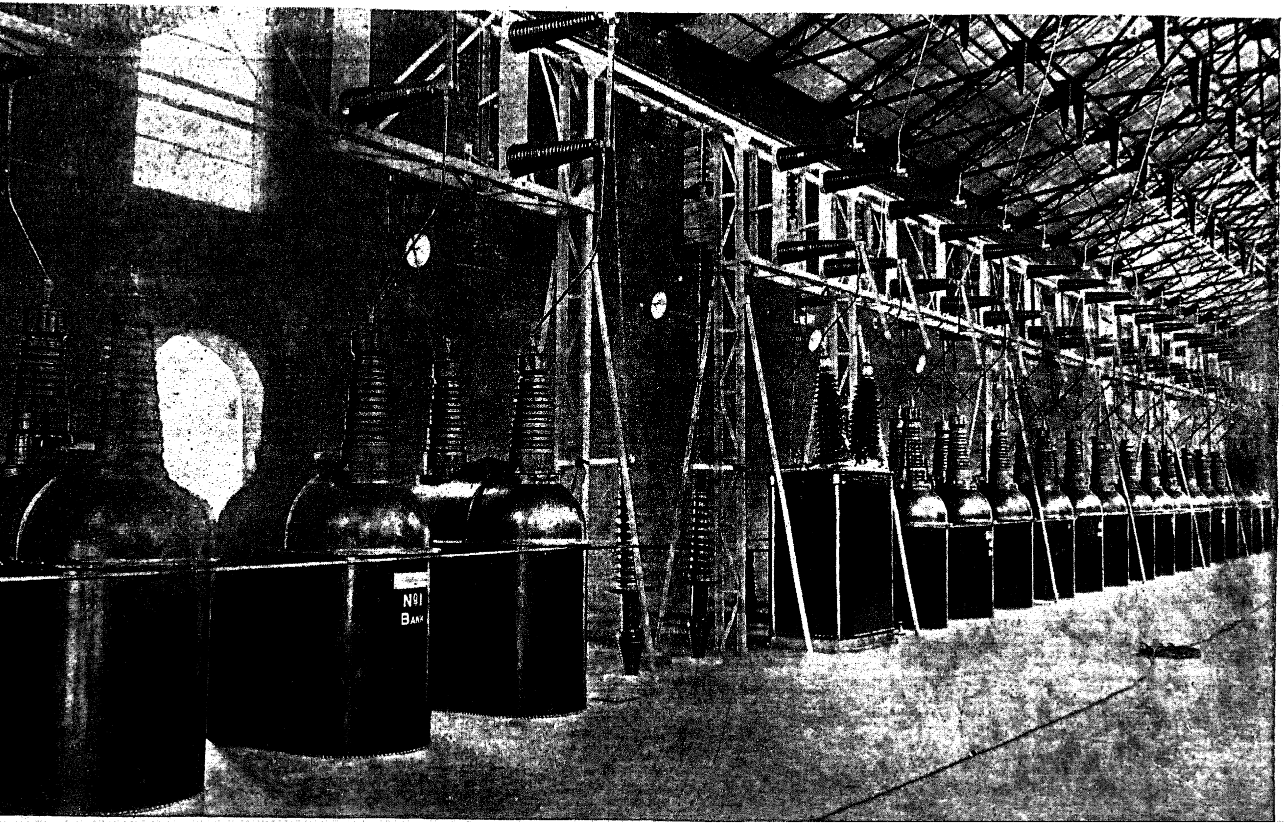
General View showing Power House and Pipe Line at Campoli.

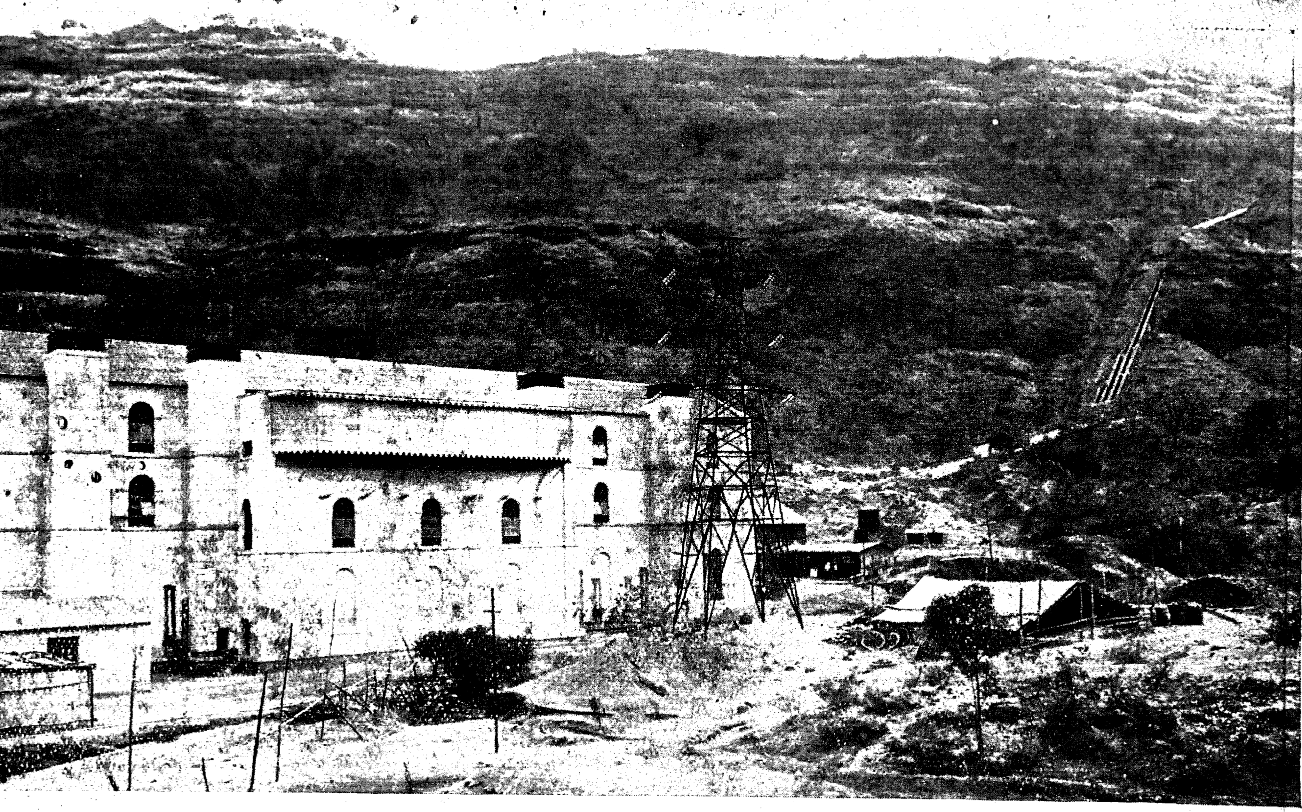


Wrought steel pipes entering Power House, Static Head, 1,725 ft.

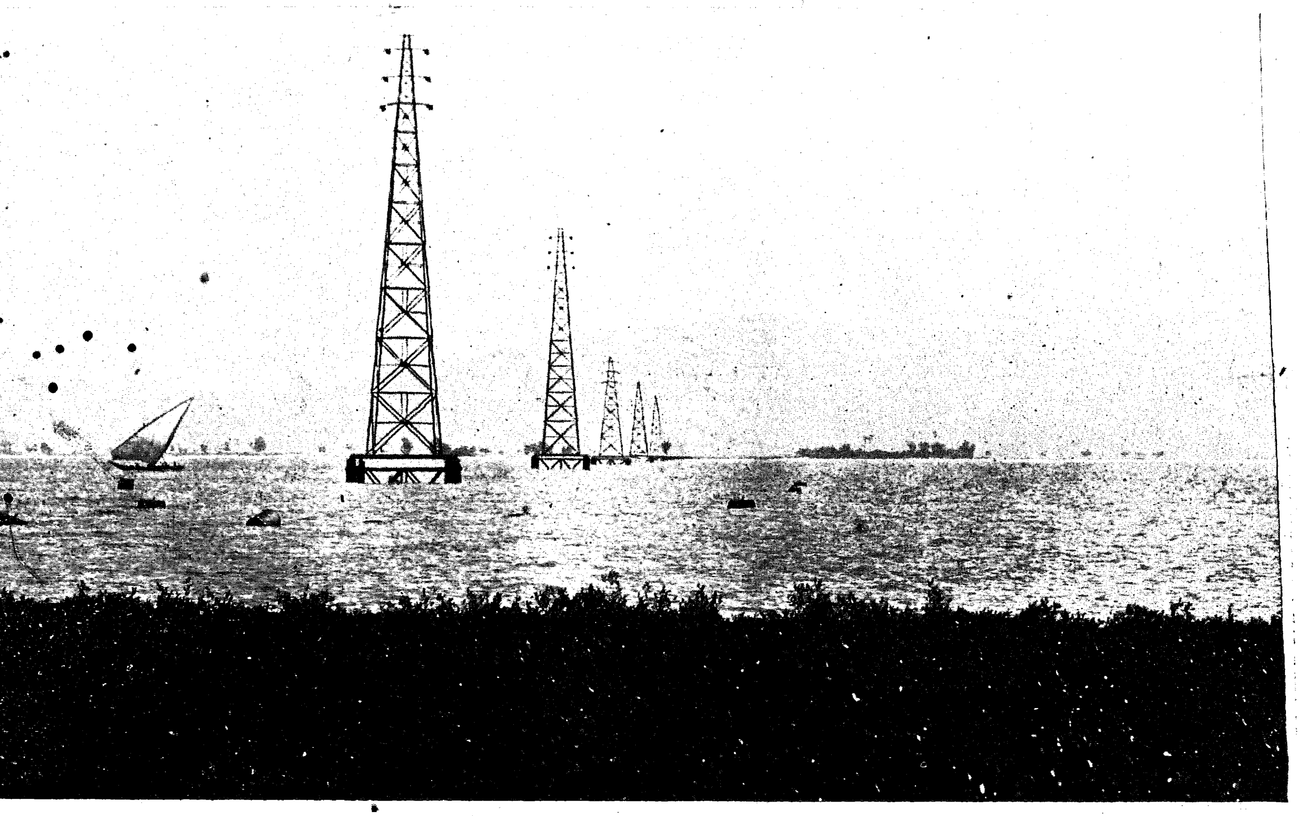


ırbine and Generator Room. Full load Capacity of each main set 13,750 B.H.P. Generation Voltage 5,000.

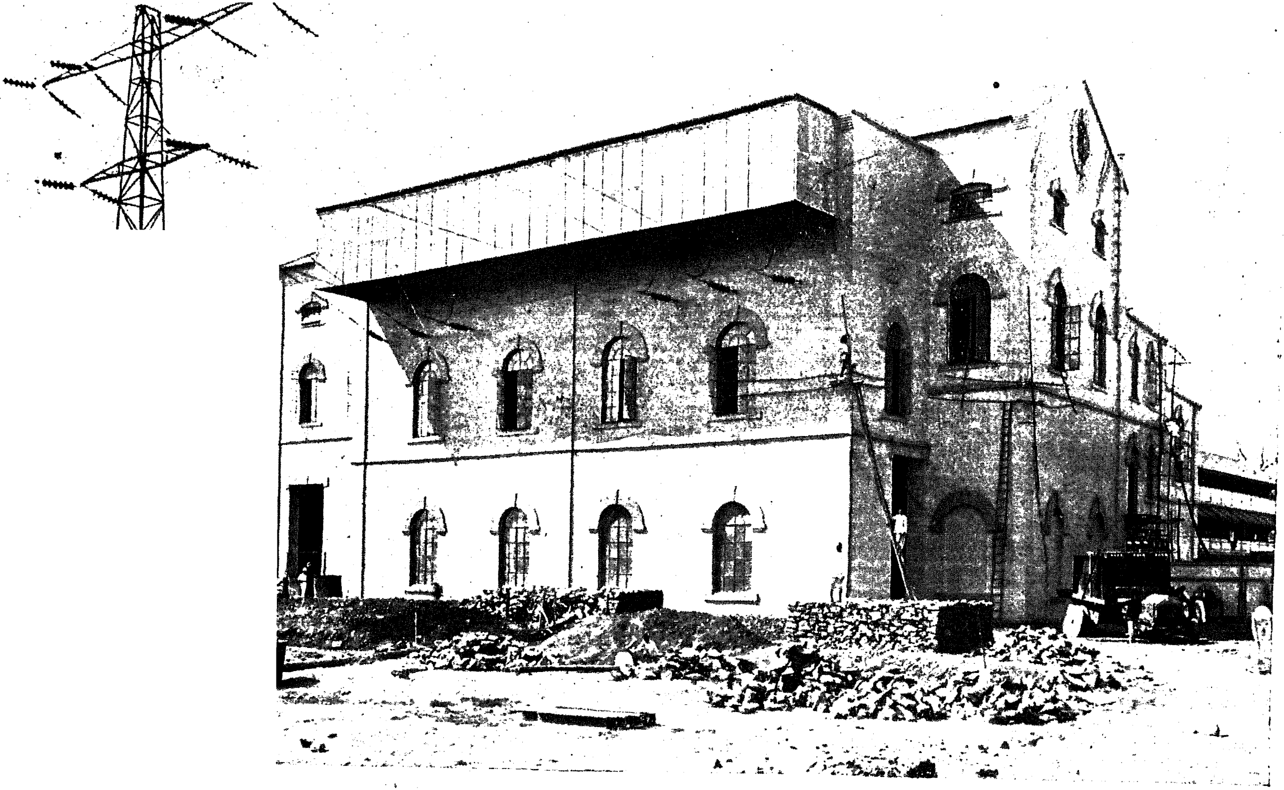

N°1
BANK



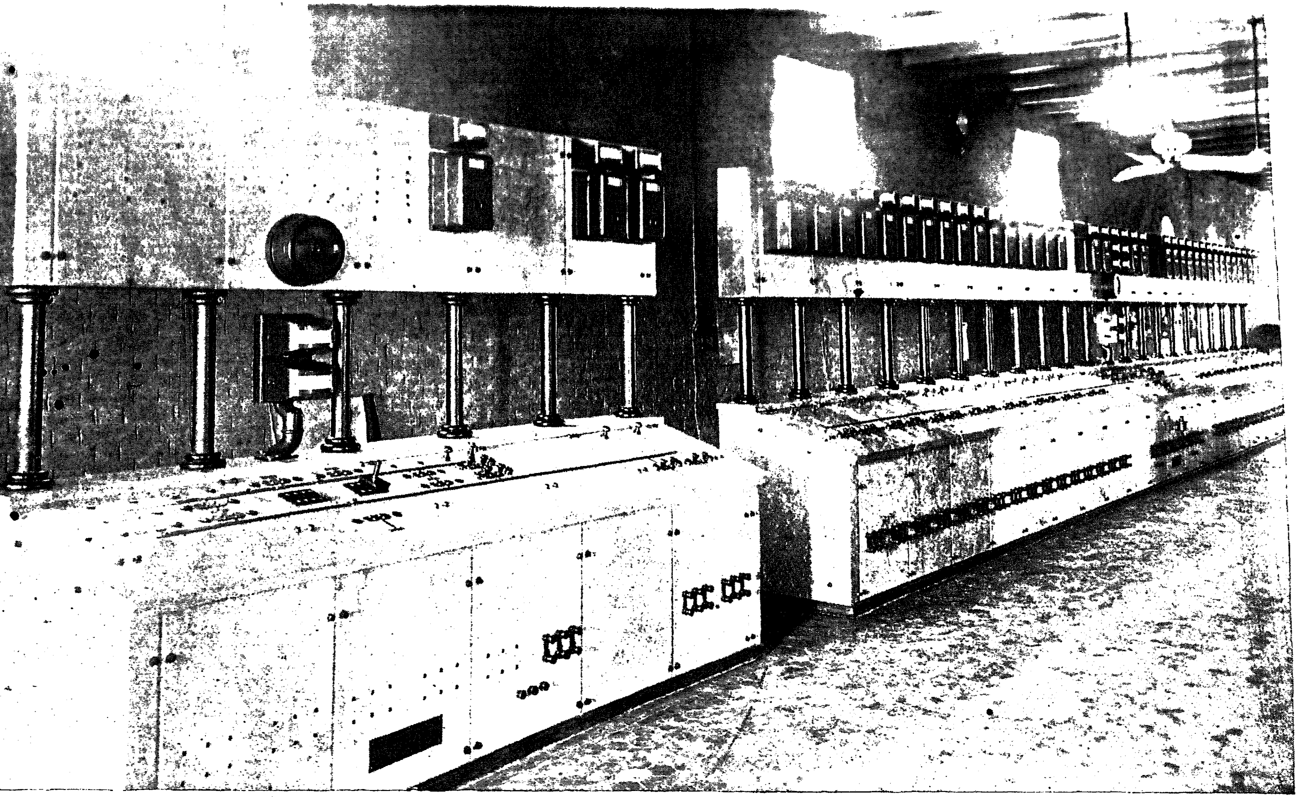
Exit of 1,00,000 Volt Transmission Line from Power House.



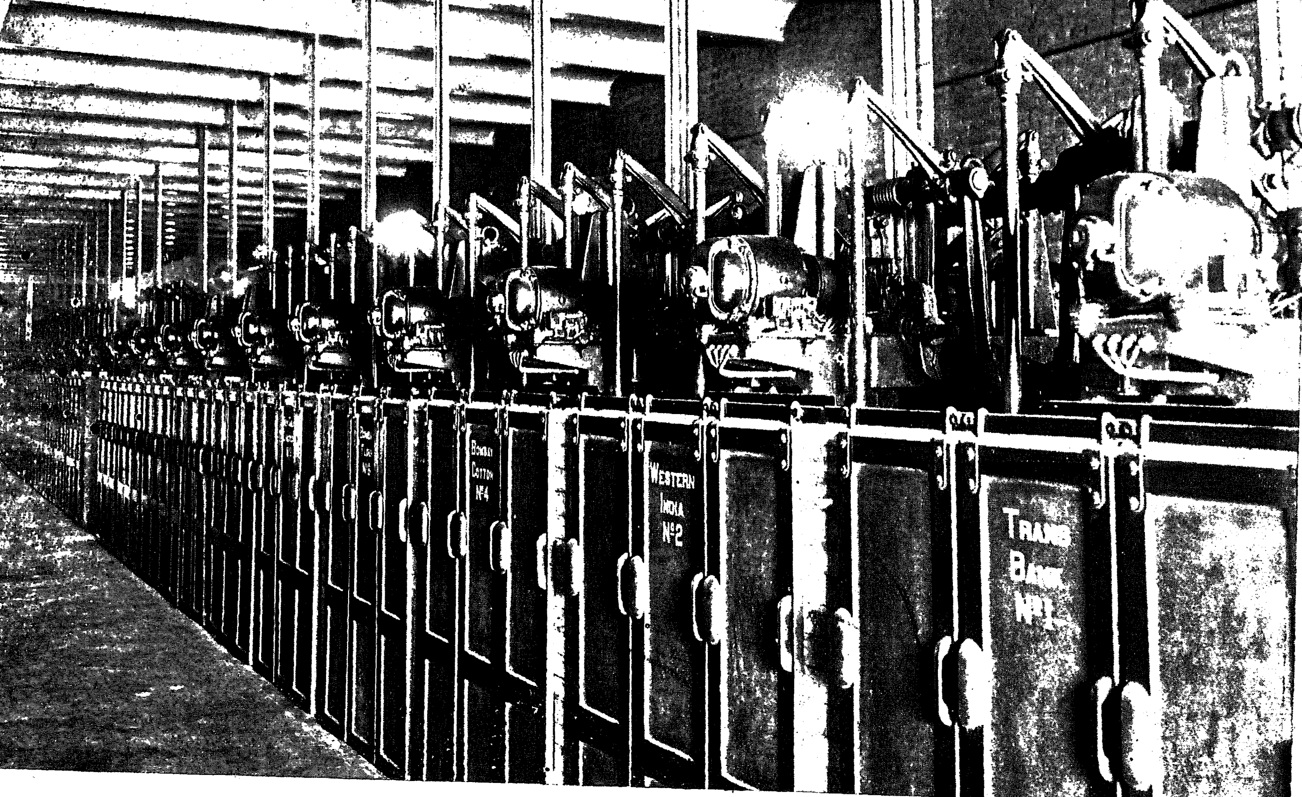
Transmission Line crossing Thana Creek. Height from [illegible] of Towers [illegible] feet [illegible]



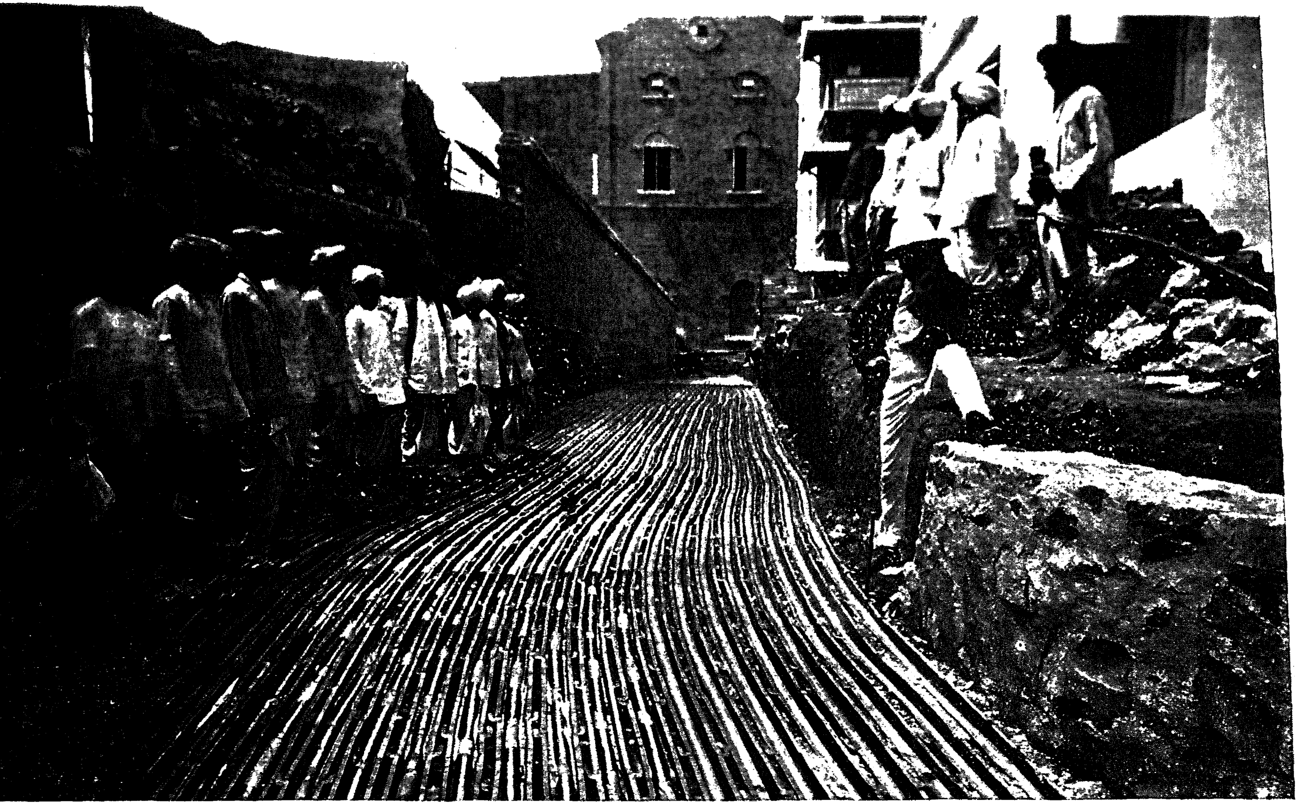
,00,000 Volt Transmission Line entering Receiving Station.



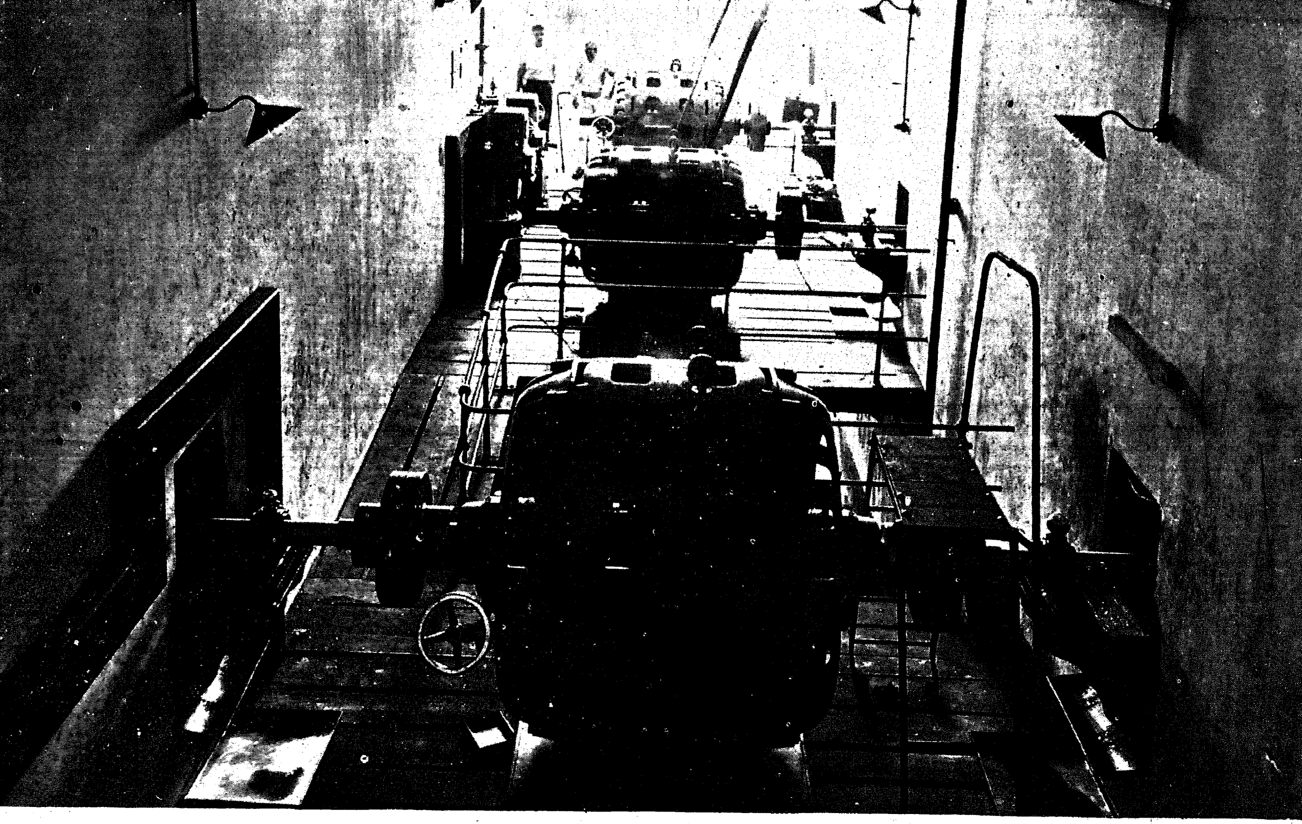
220 Volt Benchboard at Receiving Station. From this Board all the High Tension Switches are operated.



6,600 Volt Automatic Oil Switches controlling all Outgoing Feeders to the Mills.



Calenders laying Underground Feeder Cables from the Receiving Station to the Mills.



Electric Motors coupled to and driving the shafting in the Simplex Mill.

Fig. 1.

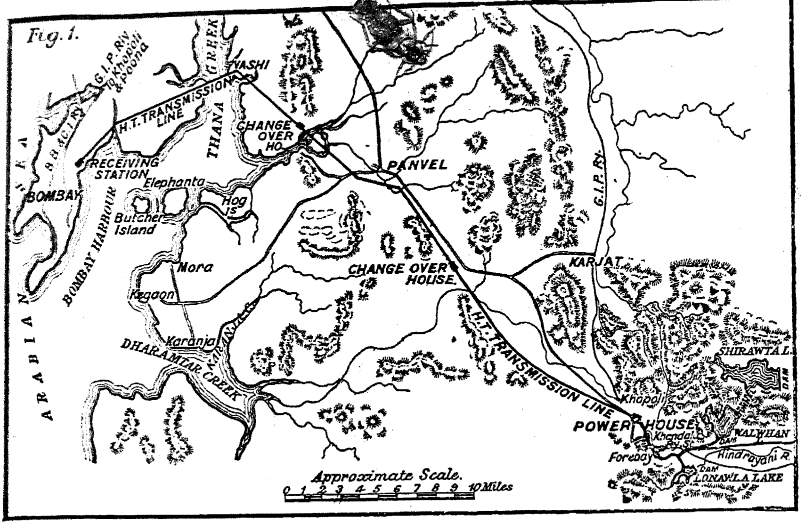
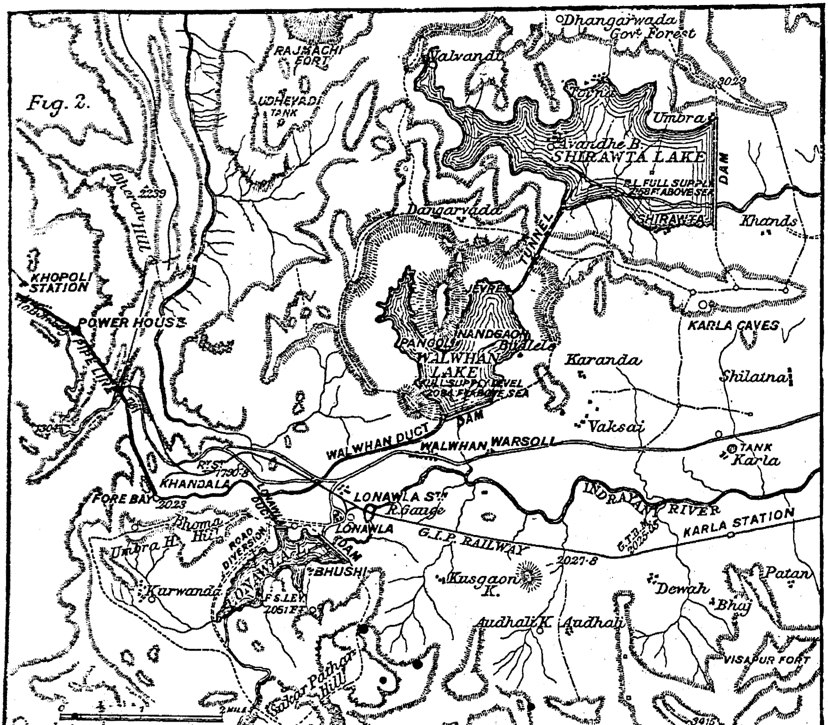

G.I.P. Rly. To Khopoli & Poona
THANA CREEK
VASHI
H.T. TRANSMISSION LINE
CHANGE OVER HO.
RECEIVING STATION
BOMBAY
SEA
Elephanta
Butcher Island
Hog Is.
BOMBAY HARBOUR
PANVEL
G.I.P. Ry.
Mora
Kegaon
Karanja
DHARAMTAR CREEK
ARABIAN
CHANGE OVER HOUSE.
H.T. TRANSMISSION LINE
KARJAT
SHIRAWTA L.
DAM
Khopoli
POWER HOUSE
Khandala Ry. St.
WALWHAN
Hindrayani R.
Forebay
DAM
LONAWLA LAKE
Approximate Scale.
0 1 2 3 4 5 6 7 8 9 10 Miles

Fig. 2.


Dhangarwada Govt. Forest
RAJMACHI FORT
UDHEVADI TANK
Valvandi
3029
Umbra
Avandhe B.
SHIRAWTA LAKE
DAM
F.L. FULL SUPPLY 2158 FT ABOVE SEA
SHIRAWTA
Khands
Dangarvada
TUNNEL
2239
KHOPOLI STATION
POWER HOUSE
PIPE LINE
JEVRE
KARLA CAVES
NANDGAON
PANGOLI
Bhaleia
WALWHAN LAKE
FULL SUPPLY LEVEL 2084 FT. ABOVE SEA
Karanda
Shilatna
DAM
Vaksai
WALWHAN DUCT
WALWHAN
WARSOLI
TANK
Karla
KHANDALA
FORE BAY
2023
LONAWLA ST.
R. Gauge
INDRAYANI RIVER
KARLA STATION
LONAWLA
G.I.P. RAILWAY
DAM
Bhoma Hill
Umbra H.
ROAD DIVERSION
BHUSHI
2027·8
Kusgaon K.
Dewah
Patan
Bhaj
Karwanda
LONAWALA L.
F.S.LEV. 2051 FT.
Audhali K.
Audhali
VISAPUR FORT
Sakar Pathar Hill
2 MILE

JAYAKAR MALABAR HILL BOMBAY

JAMSETJI N. TATA

INTRODUCTION.

BORN with no silver spoon in his mouth and trained during his boyhood in the school of comparative poverty, the late Mr. Jamsetji Nusservanji Tata was the architect of his own fortune. He was a type of those men who have amassed great wealth by sheer force of character and untiring energy, combined with exemplary self-reliance and an unquenchable spirit of high enterprise. Endowed by Nature with remarkable shrewdness and keen powers of observation, he was, as years rolled on, able to impress his massive personality on everything to which he put his hand. Of great perseverance and tenacity of purpose which never knew disappointment or defeat, Mr. Tata began, as wealth accumulated and experience grew, to entertain and carry out large ideas which presented themselves to his active and fertile mind with courageous resolution and remarkable success. His greatest and most far reaching schemes, however, were unfortunately left incomplete, but, which, it is gratifying

to note, his sons have brought to fruition in a spirit of filial reverance and devotion which is indeed most laudable.

Passionately fond of travel and ever eager to imbibe new ideas, he was a veritable, peripatetic, and unostentatious globetrotter with the eyes of Argus. He had visited Europe several times from 1863 forward and sojourned also in Japan and Australia. At the very outset of his mercantile career, somewhere about 1858, he had stayed in Hongkong to carry on his father's firm there. Next, business took him to London. He returned to Bombay fully equipped with mercantile experience and enriched by observation. Those stood him in good stead in his later activities. But the one valuable lesson he learnt was the use to which great wealth should be put. He became fully alive to the fact that wealth was only a means to an end, the end being to devote it as far as possible to the service of his fellow-countrymen. Thus it was that his inborn patriotism was kindled. Animated by its fire he spent in his later life no inconsiderable portion of his great riches on objects of the greatest benefit to Indian Society, leaving behind him a name and fame the fragrance

of which is destined to endure for many a generation to come.

Soon after he had his brief baptism of collegiate instruction, the Universites of India having then just been started on their noble career, he joined his father's firm. Opium and cotton were the two staple commodities in which it traded, and young Mr. Jamsetji's attention was soon engaged on them. The trade in the former took him to Hongkong first and that in the latter to London, and Liverpool later on. King Cotton was at the time throwing into the lap of Bombay merchants trading in the raw staple, thanks to the American Civil war of 1861–65, crores of silver and gold. Mr. Tata's personal presence had, therefore, become necessary in Lancashire. He was the firm's representative on the spot to dispose of the heavy consignments at Liverpool. Meanwhile, the wind of the feverish share speculation blew fast and furious in Bombay. The genius of Mr. Premchand Roychand sowed it in 1863–64 and fanned it gloriously. But the day of tribulation was never thought of. The city reaped the whirlwind of her own mad folly which ended in 1865–66 in almost universal insolvency

and untold-of distress. Credit was destroyed and mercantile confidence had received an unprecedentedly rude shock. Depression of a gloomy and protracted character prevailed. Mr. Tata's firm did not escape the effects of the disastrous cyclone. When he returned from London, Bombay was sitting on the stool of repentance, with sackcloth and ashes; while the disconsolate creditors held *Dharna* at the door of their ruined debtors.

But as every evil has its good, so the debacle of 1865–66 did lasting benefit to the city. On the detritus of the financial earthquake there slowly came to be reared the edifice of Industrialism on a foundation broad and deep. There was a new departure as trade revived and credit was restored. The era of the cotton industry was courageously ushered. It was a gratifying economic phenomenon. It vastly contributed to the prosperity of the city along with the larger progress in inland and foreign trade. The industry laid the first solid foundation of the fortunes of Mr. Tata. His prosperity was synchronous with that of the great industry itself. In 1885 Mr. Tata had already been recognised as an enterprising and flourshing mill owner.

He was a conspicuous figure on the industrial stage. Many indeed were the praiseworthy parts he played on it, earning the plaudits of the appreciative world of India. Those parts he continued to play till the date of his somewhat premature death. The last twenty years of his life were most gratifying. They were full of pride not for Bombay alone but for the whole country.

And here it may not be inappropriate to recall the origin of the first cotton spinning factory in the city. It is a most curious fact but interesting which strikes an onlooker who cares to study the rise and growth of it in Bombay and institute a comparison between its condition in 1855 and that in 1885 when it reached almost at a climax marking an epoch of the strenuous and successful enterprise of the citizens of Bombay.

It was a Parsee gentleman, Mr. Cowasji Nanabhoy Davar, of great courage and pluck, who first started the cotton factory in 1855 at Tardeo, and it was again another band of Parsee gentlemen, equally plucky and enterprising who practically developed the industry and advanced it to a highly prosperous stage a generation later, most conspicuous among

Lancashire altogether from the Indian and Chinese trade in coarser yarns. As many as 49 mills were working in the city of Bombay alone. Those were the marvelous changes in the course of a generation. The cotton industry was firmly established and flourshing beyond the dream of its original promoter!

As there is a tide in the affairs of men which carry them to the pinnacle of good fortune so there was a tide in the prosperity of Mr. Tata from 1885. Between that year and the date of his death he was continually seeking for fresh industrial fields and pastures and it goes without saying that not only he discovered but cultivated them benefitting himself and the country. Mr. Tata was a Swadeshi of Swadeshists long before Swadeshism was boomed in Bengal. As soon as he became *au courant* with every minutiœ of the cotton industry the conviction grew on his mind that India had a vast potentiality in it which the progress of time would make it realize. Those in the industrial line had only to build step by step so as to climb to the very summit. Fully impressed by this idea he, in 1886, projected another mill in Bombay which he appropriately named the "Swadeshi Mills." The

original scheme was to spin finer yarn and manufacture finer cloths, in which Manchester excelled, as the coarser yarns and cloths were driven out. So he had the honorable and patriotic ambition to compete with Lancashire in the finer goods so as to materially reduce the imports. Given the requisite class of men and the needed capital and enterprise and it was his settled conviction that in the long run India, as of yore, would become her own manufacturer of all kinds of cloth and even be a large exporter. The golden vision of the days when she was the sole maker of all the finer goods which had brought fame to her primitive handloom weavers was ever before his eyes. In divers directions, he was unstinting in his expenditure on trials. and tests. The ring spindle found in him the first and the firmest friend notably when the greatest scepticism prevailed among the older makers of machinery. But undaunted he fearlessly introduced that new spindle which replaced the throstle and proved to those very manufacturers what a revolution that spindle would make. His prophecy, based on his personal experience, derived at great cost, has been amply verified. The success of the ring

spindle logically led to a fresh survery of the improvement of the indigenous varieties of long stapled cotton and the more extensive cultivation there-of on the Egyptian method. Fine yarn signifies cotton of a superior grade and strong test. Mr. Tata, here too, was the very first to draw the attention of his brother mill owners in a practical manner. His third great enterprise was also in reference to the cotton industry. It was the serious question of freight of yarn bales exported to China. There was a combine of the principal navigation companies, detrimental to the large exporters of yarn to Hongkong and Shanghai. Absence of competition was the opportunity of the combine. The monopoly in freight Mr. Tata strenously strove to break down. Alone he did it. He interested some of the more important Japanese Liners to bring silks and coal from Japan and carry in return cotton and yarn. At the time Japan was no competitor in the markets of China for Indian yarn. But it absorbed itself a large quantity of the same. Again, its imports of Indian cotton were a trifle. Thus it suited the Japanese lines to carry freight to and fro. The enterprise was full of risk; and exceedingly bold. But bold-

ness in trade was one of the principal traits of Mr. Tata's character. How the enterprise afterwards broke down owing to the failure of the promised support by the selfish mill-owners is a different tale which will be more minutely described in the sequel.

Thereafter Mr. Tata, diverted his attention in reference to the expansion of the Indian industries, to the founding of a Scientific Research Institute for which he set apart a princely sum of 30 lacs. The patriotism of Mr. Tata was fired and thenceforward his whole time and attention were concentrated on the two gigantic and costly enterprises which will for ever be associated with his name. They were his *magnum opus*, the manufacture of pig iron and steel from Indian iron ores and the utilization of water power by means of electricity.

Life, however, soon ebbed away, alas! a little too prematurely. But all the same the name of Mr. J. N. Tata is already inscribed on an enduring monument in this country as a great captain of industry and a patriot of the purest ray serene. The career of Mr. Tata is such as to leave a fragrance behind which we are sure will last for many a generation to come.

EARLY CAREER.

MR. TATA was born at Navsari in 1839 of poor but respectable parents belonging to the priestly caste. Navsari, which is a fairly populous town in the territory of H. H. the Maharaja of Baroda, is situated only a few miles from Surat. It has been the stronghold of Zoroastrian priesthood for upwards of a thousand years, say, from the days that colonies of refugees, flying from the Mahomedan persecution in Persia, came to settle in different places in Guzerat. Many have been the traditions and anecdotes of acrimonious and animated theological controversies in that citadel of Zoroastrian orthodoxy, sometimes between the rival priestly factions for theocratic supremacy, sometimes between the laity and the clergy, and sometimes between foreign missions and the divided clergy. That being the case it is quite believable that Navsari had had from time to time its own Athanasiuses. Perhaps nowhere was the *odium theologicum* more rife than in that little town

otherwise a sleepy hollow. Self-contained and opinionated, obtuse and aggressive, the hierarchy disdained to be illumined by the outer light of civilisation and progress. Devout and faithful followers of their pristine creed which teaches Light as the Spirit Divine of the good Hormuzd, those zealots, by a curious irony of fate, preferred to live in Darkness over which presides the evil spirit of Ahreman. Thus the Zoroastrian priesthood of Navsari dwelt and a cimmerian cosmos of their own and their angry discussions were like unto Vesuvius in eruption. There was ample and enough to spare of their theological lava and brimstone. When, however, we clear the ground of the molten mass, we are able clearly to discern that at the bottom of it all was the burning desire to keep alive pure and undefiled the faith of their great Teacher, mixed as it was by contact with Hinduism in the midst of which they had to live, move, and have their being. What was originally prescribed in the Avesta and what were the ancient customs, ceremonials and usages were the theme of those animated controversies. Thus they came to be practised controversialists. Each debater came to display his own strong conviction

with a doggedness and persistence which one cannot but admire. Doggedness and perseverance were the two principle traits of the controversial clergy at Navsari.

Brought up in his boyhood in a community possessing such traits it is perfectly intelligible what influence heredity and environments must have exerted themselves on Mr. Jamsetji who all through his life was pre-eminently distinguished for his great force of character and perseverance. Education in the sense we understand it was nowhere in Navsari, but of religious instruction in the Zoroastrian scriptures there was enough and to spare. There were learned Dasturs who knew how to teach the young Parsi idea to shoot. That instruction Jamsetji had. A secular education in the three R's too, he had had, specially mental arithmetic which was greatly looked after. But that was enough and in order that Mr. Tata should have more modern education he was sent to Bombay in 1852 at the age of thirteen.

The atmosphere to which Mr. Jamsetji was translated was of course wide asunder as the poles from that in which he had passed his boyhood. He found himself in an entirely new

world of large population, different races and creeds and above all of diverse occupation and activities. He was in the midst of new environments socially, intellectually and morally. Bombay was to him a new Jerusalem. When he arrived there was a state school and college under one roof which bore the honoured name of the great Elphinstone. Mr. Jamsetji had the benefit of the excellent instruction imparted there. His academic career, which was unaccompanied by any notable incident, came to a close early in 1858, just about the time that the three Presidential Universities, having received their Charter of incorporation under the benign statesmanship of Lord Canning, had entered on their noble work of imparting higher learning. Meanwhile his father was in the possession of a modest fortune and had been trading with China. Mr. Tata Junior was now at the desk in the firm acquainting himself with the trade and the mechanism of exchange. Opium trade was then mostly confined to a colony of rich and enterprising Parsees who had settled there long anterior to the acquisition of Hongkong by the British. The trade was a kind of sealed book to the vast majority; and

there being no competition they prospered exceedingly. Let it be remembered that those were days when telegraphy, wireless or any other, was nowhere, or at best in its infancy within India alone, and the mercantile navigation service between Bombay and the far East was also inadequate and slow. The trade was a kind of close monopoly and most remunerative. Having acquainted himself with business details in his father's firm Mr. Jamsetji was sent to Hongkong where he completed his training in respect of the China trade and developed his native instinct of shrewdness and commercial sagacity.

But while at Hongkong there was happening a great event, a fierce struggle in fact, in the far west which transcended the War of Independence. The civil war between the Northeners and Southerners which lasted for five years (1861–65) was disastrous not only to the belligerents themselves but to Lancashire which was famished for the regular supply of cotton for its factories. Prices of the raw staple began to rise slowly in Liverpool till 24d. was reached. As the supply became more and more scarce India came to the help of Lancashire with great

profit to herself. Bombay, of course, was the chief beneficiary as it was the principal exporter of nine-tenths of the supply. The merchants reaped a rich harvest of profits. These came mostly in the shape of nuggets of gold and bars of silver which have been authentically recorded at 51 crores of Rupees. The firm of Mr. Tata at the time was trading in cotton and had established good business relations with Mr. Premchand Roychand. This plethora of wealth led to an unprecedented speculation in the city reminding us of the South Sea Scheme. A variety of Banking and financial institutions were started and their shares came awhile to be sold at a fabulous premium. One of the earliest and most influential of those was the Asiatic Banking Corporation with which Mr. Premchand had a great deal to do. It was arranged that a bank should be opened in London also. Mr. Jamsetji Tata had to return to Bombay in 1863 with a view to establish such a bank there and at the same time to look after the cotton consignments of the firm. The project of the bank, however, came to be abandoned and Mr. Tata devoted his whole attention to the cotton shipments.

Those were the halcyon days of 1863 and

1864. Speculation was at a boiling point and Mr. Premchand Roychand was the prince of that speculation. It is irrelavent to refer to that stirring epoch. An account of it may be read in the history of it which I published in 1910 (Combridge & Co). But a passing reference all the same may be made to it in order to illustrate the subject of this brief memoir. The American war came to an end early in 1865 with the surrender of the Southern army under General Lee. The news came as a terrible bomb shell on the speculators in Bombay and on the cotton traders. Prices of cotton and shares began to fall from day to day till the crisis reached its climax on 1st July 1865 which is recorded as the black day in the city. There was a disastrous aftermath. Old and wealthy firms were either plunged in heavy insolvency or in the greatest embarassments. The general population suffered immensely. Credit was wrecked and distress of an intense character prevailed for a long time. The law courts were over busy with suits and liquidation orders. Debtors were creditors and creditors debtors. The rich became poor and the poor were impoverished and in the direst straits. That was the condi-

tion when the day of reckoning came. It goes without saying that the firm of Tata was hard hit. Mr. Jamsetji Tata had to liquidate the branch in England and return to Bombay. The local head office was barely able to stand on its legs, such was the general aftermath of the speculation.

There was a serious ebb in the fortune of the house of Tata. While it was slowly attempting to rehabilitate itself, an event occurred which was to restore its shattered fortune and lay anew, on a solid foundation, the future prosperity of the firm. The Abyssynian war was declared against Theodore, the king or Negus of Abyssynia who had stupidly refused to relieve two British officers who had gone as an embassy to him to get Consul Cameron relieved from his captivity. Sir Robert Napier (afterwards Lord Napier of Magdala), was in command of the army which was moved from Bombay. Having had previous experience of commissariat contracts, Messrs. Tata, with a syndicate of other contractors, were entrusted with the supply of provision and other equipments for the troops.

Sir Robert Napier had a most arduous and difficult campaign before him. He would not

leave anything to chance. Neither would he court a defeat while the march to Magdala from Zoula Bay in the Red Sea was exceedingly difficult in a strange and unexplored country. He therefore demanded that a year's supply should be provided. The war was consummately planned and by the time Sir Robert had reached the capital, King Theodore rather than suffer defeat, committed suicide. So the war came to an end, a great deal earlier than anticipated. The profits were said to be large beyond the most sanguine anticipation. It was a war in which much public monies were wasted. *The Bombay Gazette*, then a most powerful and influential journal denounced the waste of public monies. That there was an enormous waste both in India and in England was indisputably proved. When the late professor Fawcett raised a debate in the House of Commons, a departmental committee of enquiry was instituted and it was finally ascertained that the expenditure originally submitted to parliament at a million sterling had mounted to eleven millions but the waste was more or less with the War Office in England and the Bombay government.

The firm of Tata was fairly rehabilitated

and set upon its legs. Mr. Jamsetji Tata then cast about for some other business opening. The attention of a few sagacious in the city was turned to the cotton industry. With two or three other partners an oil pressing factory, which had gone into liquidation was purchased and converted into a spinning and weaving mill. As yet the cotton industry which had been absolutely paralized during the American war—it being impossible to work with cotton ranging from 500 to 700 Rs. per candy—was in its infancy. In the early part of the seventies there were no more than 8 Mills. The factory prospered and a handsome profit was realised. A wealthy Hindu merchant Mr. Kessowji Naik, broker to the eminent house of Messrs. W. Nicol & Co., having offered to buy it at a good profit, the concern was sold out. But Mr. Jamsetji Tata determined that he should now establish a factory of his own, fully convinced by his practical experience of the Chinchpogly mill, that the future prosperity of Bombay must largely depend on cotton spinning and weaving. With this conviction he resolved to proceed to Manchester and make himself fully acquainted with the condition of the industry there,

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and how large a mill may be equipped in India so as to earn handsome profits. With his departure to England for the second time closed the first period of Mr. Tata's vicissitudes of fortune and his earliest business career.

HIS MERIDIAN OF PROSPERITY.

Returning from London, Mr. Tata busily engaged himself exploring spots near and far where he might successfully plant his mill. He was firmly imbued with the conviction that a cotton mill within a few miles' radius of a district where cotton was abundantly cultivated, was best situated and advantaged. That his view on this point was sound has been demonstrated over and over by the many cotton mills which have since sprung in Khandesh, the Central Provinces and Guzerat which are all cotton growing districts. Nagpur attracted his greatest attention and after visiting many localities in pursuit of a site he eventually selected that city. The selection was wise. Nagpur is really the great distributing centre of the agricultural products of the Central Provinces, specially wheat and seed. It is also the entrepot of all inland imports by rail. Piece goods, yarn, and other commodities, indigenous and foreign go there for distribution among the consumers. So the

needed land, which at the time was cheap enough, was acquired and the building of the mill and the equipping of it with machinery commenced soon after in right earnest. Mr. Tata was indefatigable in his personal supervision. Vigilance over the contractors and efficiancy of the job were essential. All had been completed by the close of 1876 and the first January of 1877 was fixed for the starting of the mill with some ceremony. There was a large gathering of the local community and also of those invited from Bombay. Sir John Morris, Chief Commissioner of the Central Provinces, who took the keenest interest in the first important cotton factory established in the province, presided. The occasion, auspicious as it was, was doubly memorable as on that day Queen Victoria was proclaimed Empress of India and in commemoration of such an historical event the mill itself was named. "The Empress Mill," though of course, the name of the company was the "Central Indian Spinning and Weaving Company Limited." The start was good but in the initial stage many a difficulty in the practical working had had to be surmounted. Mr. Tata, however, was

singularly lucky in the choice of his superior staff and manager. Mr. (now Sir) Bejonji Dadabhai was appointed Manager for his great administrative ability which was so well recognized in his former post as assistant goods Traffic Manager on the G. I. P. Railway. Though no specialist in any branch of the cotton industry, by his great natural intelligence, penetrating insight, steady perseverance, and indomitable capacity for the hardest and most complicated work, he soon proved his undoubted competency to manage and control, with the highest tact and judgment, so large an establishment as a cotton mill. The choice has been justified a hundredfold while the brilliant success the mill has achieved all throughout is principally owing to Sir Bejonji. No mill manager has enjoyed the unbounded confidence of the agents as he and none has reciprocated it with such exceptional ability and sagacity. In short, it may be said here without a word of exaggeration that Sir Bejonji has shown himself in mill management a *facile princeps* in every respect. He is a rare example of what ability and integrity can accomplish in the industry.

Apart from this, the unprecedented success

arduous and uphill work for the first ten or fifteen years. But he had as already observed, able co-adjutors and lieutenants who were capable of putting into execution his new ideas. Everytime that he returned from his travels to Europe, he brought with him a quiver full of ideas. His keen and penetrating faculties of observation were such that he went about many a manufacturing town with his eyes open and with a burning desire to learn what may be useful. It was the same when he visited Japan. He returned to Bombay brimful of a variety of ideas not only in reference to cotton spinning and weaving, but also in respect to agriculture, coal, mining and so on. It should also be remembered that during the earlier years of working the mill, it was not all smooth sailing. Innumerable were the small difficulties that had cropped up and which acted on the sensitive mind of Mr. Tata as so many pin pricks. But all the troubles began to disappear as experience was acquired year after year. The financial success of the mill was assured while Sir Bejonji had not only strengthened its stability but had crowned its edifice. It is not surprising that with all this exercise of patience

and perseverance, of trials and disappointments, and the earnest desire to do the very best, prosperity accompanied the mill as years went on. The dividends were handsome, while large sums were set apart for repairs and renewals and replacement of worn out machinery. From the commencement of the starting of the mill for work up to 31st December 1913 dividends amounting to Rs. 2,43,45,007 have been paid to the proprietary on a fully paid up share of the value of Rs. 500. There has been paid by way of a bonus from reserved profits 2⅛ shares fully paid up of Rs. 500 each to the shareholders. In other words, the company has made a present to the shareholders of 2⅛ shares per share. They had not been asked to pay any call on the new issue. The amount was as it were transferred from the reserve to capital account which now stands at Rs. 46,87,000. Lately, in order to avoid borrowing publicly monies from time to time at varying rates, preference shares have been issued bearing interest at 5 per cent. thus bringing up the amount of the capital to Rs. 96,87,500. This preference stock of the value of fifty lakhs has become a most popular form of investment. Thus, it will be seen

how a well-managed mill, equipped up-to-date, has been able to benefit the proprietary and become the subject of high encomiums all round in the cotton industry. But Mr. Tata was not satisfied with advancing the prosperity of the company alone. With a large mind and heart he took the greatest pains to promote the material welfare of those by whose hands alone the mill was made a success. The contentment and wellbeing of the operatives themselves was his constant care. By means of a well considered and generous scheme a variety of prizes were instituted for the best attendance and greatest efficiency among the hands. The institution of prizes has had the agreeable effect of stimulating healthy rivalry among the operatives. Besides, there is paid an annual bonus to all hands and the yearly bonus and prize distribution day is kept as a general holiday. Provision is also made for meritorious service after a long retirement. Gratuities and compensations are awarded to those deserving and physically incapacitated. The combined result of all this is that the operatives are devotedly attached to the mill. They have made the fortunes of the mill their

own. They have become conscious of the fact of identity of interests. Several Bombay mills have followed the example first set by Mr. Tata. Again, the subordinate staff of employees have not been forgotten. There well-being, too, has been considered. There is a reading room and Library and a recreation ground for them. These amenities by way of relaxation after a hard day's labour are greatly appreciated. Lastly, Mr. Tata instituted the system of apprenticeship whereby fairly educated young men are admitted in a certain proportion every year for the purpose of getting themselves trained in the different branches of the industry. Each has to sign an apprentice bond for a period of three years during which he is allowed a small guaranteed salary for maintaining himself, subject, of course, to efficiency, good conduct, and perfect integrity to the employers. The company reserves to itself the option to engage him after three years' probation in some department or other for which he may have qualified himself on a fair salary.

Ten years' experience of the practical working of the mill prompted Mr. Tata to embark on another kindred enterprise but having for

its object the spinning and weaving of finer yarns in cloth. By 1885, numerous mills had sprung up in Bombay and elsewhere. But every one without exception was equipped for turning out coarser kinds of goods. Mr. Tata with his individuality thought that the time had come for taking a new departure in the industry. Firmly of conviction that with a longer stapled variety of cotton, finer goods could be successfully manufactured, he started a new company for the purpose which he very appropriately named the Swadeshi. Land was purchased in the vicinity of the Victoria Gardens and all other preliminaries had been completed. It so happened, however, that at the time the largest mill in the Presidency, known as the Dharamsi, was put up publicly for sale. Mr. Tata bid for it and it was knocked down to him for twelve and a half lakhs. The mill had cost over fifty lakhs and it was thought a cheap bargain at the time.

But soon after the acquisition of the factory it gradually became transparent that the mill would require extensive overhaul of a most radical character, so much so that what was once exultingly considered to be the cheapest was going to be the dearest concern. Mr. Tata

however, had put his foot on it in spite of expert advice to the contrary. It was one of his few great blunders. The mill gave infinite trouble in the matter of renovation and reconstruction for well nigh ten years. Many indeed were the vicissitudes and crises through which it had to pass before being made a fairly up-to-date mill giving moderate dividend. Though repentant Mr. Tata, bated not a jot, and courageously persevered in order to make it a really first class concern, a sister in fact of the successful one at Nagpur. Here again while the transition stage lasted he displayed that doggedness and tenacity of purpose which all through were so prominent in his industrial career. Robustly following his principle, never to be defeated, he put his shoulder to the wheel of the rotten " Dharamsi (rechristened Swadeshi)," till at last he made it an absolute success. This instance of how a worn out mill, by dint of perseverance and liberal but judicious expenditure might be converted into a going and remunerative concern is indeed most remarkable. For it is not known in the annals of the cotton industry in Bombay that any mill owner has ever been able to set upon its legs a hopelessly tumble down concern as the

production. In vain did he contend with Messrs. Platt Brothers to construct ring frames which one or two other Manchester machine makers had actually commenced doing. In vain, he pleaded for their efficiency and productive capacity; that first class firm was obdurate. Its conservatism was so deep rooted that it would not look at the rival spindle which was in a few short years destined to revolutionize the whole spinning industry. Failing to persuade Messrs. Platt's, Mr. Tata boldly went forward in replacing his "Empress" mills with those new spindles. Messrs. Brooks and Doxey, the rival manufacturers and the pioneers, were thus able to secure Mr. Tata's custom. And every defect in working was pointed out to them, so that they might improve on their original pattern and make the machine a perfect one. As a result, mill after mill began to follow the lead of Mr. Tata who had the unbounded satisfaction to see at last the conservative Messrs. Platt's falling into a line with their rivals who meanwhile firmly established their reputation. The incident, again, tells us plainly what a great leader Mr. Tata was in the line and how he enhanced his own

reputation while conferring an immeasurable benefit on the other mills. In short, no new improvement or any new invention in spinning and weaving machinery ever escaped the lynx eye of Mr. Tata. He was always for giving each a full and fair trial and he would not swerve from his determination to introduce it unless his trials conclusively demonstrated the futility of it. Similarly, long long before the days of working a factory at night with electric lights Mr. Tata experimented with them at the "Empress" mills. It owes its intimate popularity to Mr. Tata who introduced it at a time when it was almost unknown in India. So far as working by that light he proved it to the industrial world of India that it was practicable. But its remunerative success was deemed doubtful at the time, and the experiment therefore had to be given up. It is still considered that working a mill by electric light at night is a costly experiment with no corresponding profit or advantage, though they in Japan work with it most successfully.

Fully convinced of the practicability of spinning finer counts with long stapled cotton, Mr. Tata devoted a great deal of his attention to the

improvement in the method of cultivation of the varieties of such cotton grown in different parts of India. Having closely watched the method adopted by the Egyptian ryot he was of opinion that with a fair amount of intelligence and concrete examples the Indian cultivator of cotton might be gradually accustomed to that method. He accordingly took pains to put his views in a brochure and describe the method followed in Egypt. But such was the apathy or indifference of those most interested in the industry that nothing came of it. Again, the Indian Government in the early nineties had not become fully alive to the immense importance to the country of improved and extended cotton cultivation though it is a source of gratification to record the activity it has displayed in the matter since the reconstruction and expansion of the agricultural department thanks to the energy and initiation of Lord Curzon, the Viceroy of "Efficiency" in every branch of the Indian administration. The annual report of the Imperial department of agriculture tells us what measures are taken from time to time to improve indigenous varieties, to cultivate hybrids, and rear exotics

in different soils by more enlightened methods. The literature is annually increasing, while one of the best results of the efforts of the Government may be seen in the comparative success that has been achieved in growing in Sind by means of irrigation water what is commercially known as the *Sind American Cotton.* It is also gratifying to record that it is to the firm of Tata & Sons that the Government looks for giving them tests of the varieties of cotton grown at different experimental farms. The firm are the official referrees on cotton.

Lastly, reference may be needed to another important direction in which Mr. Tata worked hard for the trade of cottons. The problem of improved methods of cultivation was one branch. The means of cheapened transportation of the finished products was another. What had been going on for some years in the matter of steam freight to Hongkong and Shanghai was this. The P. & O. Company had the largest share of the conveyance of yarn bales to Chinese and even Japanese ports. Next to that company were the lines of the Austrian Lloyds and the Rubbatino companies. The exports of yarn of Bombay

mills to these ports had been going upwards by leaps and bounds from the middle of 1885, apparently owing to increased production of the large number of mills that had been erected. As more mills began to be constructed and more yarn was turned out the exports *pro tanto* were greater. Viewing the situation, the navigation companies referred to became keenly alive to realising larger profits from freight. They were conscious of their strength to demand what freight per cubic ton they pleased. So the rates of freight were screwed up by the three rivals entering into a combine. The shippers began to grumble until loud murmurs were heard on every side. Mr. Tata took up the question of freights, seeing that his own firm were one of the largest shippers of yarn to China and Japan. It should be remembered that at the date of the agitation for reduced freights, Japan was rather an importer of Bombay yarn than an exporter and no rival in the common markets of Hongkong and Shanghai. Of course, as that country extended its cotton industry by following Bombay's example, the imports of Indian yarn showed proportionate diminution. Having visited Japan, and seen whether there

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Mr. Tata to carry so bold an enterprise
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›ted a stroke so fatal to their interests

as carriers. So they set up a counter move. They followed the vulgar trade trick of breaking down this formidable opposition by means of a ridiculous reduction in freight. From 13 and 19 Rupees per cubic ton to Hongkong and Shanghai respectively, they brought down the rate to the ruinous figure of Rupees Two! The P. & O. Company went one better and attracted freight at the nominal rate of a Rupee! It was indeed a trial of strength, a regular war of freights between a powerful combination and a single person of indomitable courage and equally strong to bear the loss. The war would have ended in the complete triumph of Mr. Tata and for ever have destroyed the monopoly of freight besides teaching an object lesson never to be forgotten. But unfortunately the tempting offer of the ridiculous rate, tantamount to free freight, was irresistible to the largest shippers who, to their eternal discredit, broke their agreement. The example was contageous and the signateries dropped one after the other. The monopolists gained their object in view but not without fixing the freight later on at a considerably lower figure than the one which had normally ruled prior to the freight war.

This breach of faith on the part of the guarantors no doubt exceedingly vexed Mr. Tata who had so patriotically striven once for all to show to the foreign combines what united indigenous organisation could achieve. But he took this faithlessness with stoic composure, comforting himself with the thought that at any rate he had shown the way as to what Indians could accomplish when intent on doing so with unity of aim and purpose. The example was followed once more a few years ago when a similar enterprise but with an *English* ship owning line was embarked upon with this further good result that another material reduction in China freights had to be undergone by the combine. Thus at the very meridian of his prosperity Mr. Tata had demonstrated the value of Swadeshism in matters industrial and commercial. No academic person, his motto was action, action, action. Action was the key to all his enterprises. They were not to be mere paper ones. The abstract had to be translated on the terms of the concrete. A practical man, he showed the way to his countrymen how wealth acquired may be put to the best productive uses which might benefit the country and advance the

people a stage forward in their struggle for material prosperity. By 1895, Mr. Tata had amply proved his credentials as a great man of action, courageous enterprise and the most brilliant pioneer of indigenous industrialism on well ordered and sound lines. Enough had been accomplished between 1875 and 1895 to inscribe his name on the page of the industrial history of this great country during the close of the progressive nineteenth century.

Mr. TATA'S CLOSING YEARS OF EPOCH MAKING ENTERPRISE.

THE sun of Mr. Tata's prosperity which had reached its meridian now befriended him even more all through till the sun of his own existence came to an untimely end. The stars in their course were most favourable to him and Dame Fortune showered her bounteous favours on him unstintedly. He had after 1895 resolved to practically put into execution those larger ideals which for twenty years had been floating in his ever active mind. His business now rested on a solid foundation. It was wholly carried on by a loyal, trusty and experienced band of employees. He relied on these to do their appointed work. Mr. Tata was a firm believer in the efficacy of division of labour accompanied by implicit confidence. The two mills had passed their age of adolescence with the vicissitudes not unusual to early youth. These were confided in hands at once experienced and enlightened and of shrewd business sagacity.

His was still the directing talent, but all the rest of the business was allowed to take its course under the steerage of their practised helmsmen. He now almost devoted his whole time and attention to the projects of the greatest magnitude which he had at heart.

One of the earliest of Mr. Tata's beneficent and patriotic schemes was the institution of an endowment fund for the purpose of lending money to graduates who had passed with distinction their examinations in any of the Indian Universities but were keen on further following up their studies for passing the Indian Civil Service or for qualifying themselves in one of the liberal professions or in one of the new industrial colleges and Universities in Europe, who were poor and unable to afford the necessary means to go to Europe. The scheme was well conceived and aimed at turning out in a generation a phalanx of trained Indian specialists. It was first started in 1892 and a Trust Deed was executed in the month of October of that year to fully and fairly carry out the object of the founder. At first it was intended for the benefit of young men of his own community but in 1894–95, its scope was enlarged and made

quite catholic by allowing its benefit to all graduates of the requisite attainments of any Indian University. The Trustees were to regulate and control the funds and the repayment thereof as prescribed in the trust deed. The scheme, it is needless to say, has proved eminently successful and is a striking evidence of Mr. Tata's sagacity to see the intellect of India developed on lines of self-help and self-reliance. The scheme or tuition fund further provided that after having successfully prosecuted their post graduate studies for the line they had selected the students should on return to India repay the loan advanced with interest on a guaranteed scale according to the income they were able to earn. There was a committee of supervision also whose duty was to see how the beneficiaries, during their post graduate studies in Europe behaved themselves. Till now 38 have passed of whom 23 are Parsees and 15 Non-Parsees. One of the earliest and most brilliant of such beneficiaries was Dr. Row who passed his London Medical University degree with honours in Bacteriological research. Some have entered the Civil Service while others have qualified themselves as barristers

Engineers and officers in the Public Works Department of the Government of India and others are electrical engineers one of whom holds an eminent position at Pittsburg. This endowment fund in principle is not dissimilar to that raised in Philadelphia, a century and over by its citizens in memory of the great Benjamin Franklin. Before expatiating on his three great schemes, Mr. Tata's *magnum opus*, which in their conception and execution alike should be called epoch making, a reference may be made at this stage to another good patriotic work for which Industrial Indian hasbeen exceedingly grateful to Mr. Tata. Of course it was a work of secondary importance but fully evidencing the aim and object he had constantly in view. The subject which not a little engaged his attention was the repeal of the excise duty on cloths manufactured in Indian cotton factories. The imposition of that duty in 1895 had led to a most vigorous agitation all over the country, specially in Bombay which is the greatest stronghold of cotton manufactures in this country as Manchester is in England. The Bombay Millowner's Association had submitted a well reasoned memorial to the

Government of India, and Mr. Tata and Mr. N. N. Wadia were deputed as its representatives to support that memorial by a personal interchange of views with the Finance Minister. Of course, the result was infructuous. But so keenly did Mr. Tata feel the injustice of the fiscal measure of which even the man in the street was perfectly well aware, that when he soon after visited London, he embraced the opportunity to have a private interview with Lord George Hamilton, the then Secretary of State for India. The contention of Lord George was specious and fallacious. He thought Indian mills were earning handsome profits to fatten shareholders, averaging 10 to 12 per cent. which was rarely the good fortune of Manchester, and he deemed the excise duty no burden whatever on the industry and no way contributory to the retardation of the further progress of the industry. Fully aware of the actual facts of the average earnings of Indian cotton Industry extending over a decade or more, taking the lean and fat years, Mr. Tata differed from the Secretary of State. That functionary thereupon asked him to adduce his facts. Mr. Tata promised these on his return to Bombay. He redeemed his

promise. He caused minute statistics to be collected and analysed on a scientific basis so that there might be a correct apprehension of the true average earnings of the mills. With the valuable assistance of his Secretary, Mr. Barjorji J. Padsha, M.A., a brilliant graduate of the local University, Mr. Tata was easily able to show how far his contention was correct, namely, that on an average the net profits did not exceed 6 per cent. He put his facts and arguments in the form of a brochure and presented a copy to Lord George Hamilton while distributing it broadcast among Indian millowners. Apart from the immediate object, the brochure admirably serves the purpose of informing millowners how such a subject could be scientifically treated. The method of examination adopted was one which every practical man in any industry should bear in mind. In reality, it was a kind of education in industrial statistics which any expert statistician would approve. Business economics is a science almost unknown to Indian millowners who seem to rest content with mere superficial arithmetic which eventually resolves into a dividend of so many Rupees

M. R. JAYAKAR
MALABAR HILL
BOMBAY

per annum. A scientific analysis is the last thing they ever think of. And the value of Mr. Tata's brochure lies in indicating how profits could be scientifically assessed.

A retrospect may now be taken of his epoch making projects of a vast magnitude which his capacious mind had evolved somewhat in nebulous condition at least twenty years before. But, as already observed, it was after 1895 that he had clarified his ideas and assiduously worked to give them a crystalized body and form. These were devoted to objects the most patriotic and of vastly beneficial character towards the greater material prosperity of his countrymen. After years of cogitation and mature deliberation Mr. Tata launched three projects of a veritably colossal character. Those were firstly, a scheme for manipulating iron ore in the country and converting it into steel, and secondly, of utilising the immense monsoon waters which roll down from the top of the Western Ghauts and run to waste in the valleys below as power for industrial purposes. At the same time he had also conceived the idea of a third scheme that of instituting a Scientific Research Institute. Science was the hand maid of

industry, and Mr. Tata's object was to put both on the same plane and run them simultaneously. He was fully convinced that the future of the country lay in one direction in the successful pursuit of science which may in another direction be practically called to the aid of large industries which needed fostering and developing in India with her many rich but unexplored resources. The prosecution of science, he believed would immensely benefit future generations of Indian humanity and conduce to their greater material prosperity. Science was the helpmate of industry. That was the root idea which had so long been revolving in his mind. That idea he resolutely resolved to put into practical execution. The more he revolved the idea in his head the greater became the desire to convert it into a reality. Thus it came to pass that he first sent a distinguished graduate of the local University, to collect information on the subject, to Europe and America. On the return of that alumnus the materials were gathered and the information acquired by a personal interchange of views with eminent experts in this particular line, were sifted in order to see how far they might be useful for

his purpose in India. It was a labourious task demanding not only the greatest patience and industry but high intelligence and firm mental grasp to select what was essential towards the realisation of the object. Having concluded this important preliminary operation, the next practical step was to ascertain the cost of a scheme of Research Institute of the kind required. This depended on the subjects which would be embraced in the courses to be taught by eminent specialists to be engaged for the purpose in the various departments of theoretic and applied science. That was another labourious task but not so difficult and complicated as the preliminary or fundamental one. So the estimates were made out which amounted to the sum of rupees thirty lakhs (£200,000) for capital outlay on buildings, laboratories and other requisite appurtenances and appliances and for a permanent endowment fund from the annual income of which the maintenance of the institution, including the teaching staff, might be carried on. The scheme, as then roughly prepared was submitted to a committee specially selected by Mr. Tata of men of University culture, more or less who, might carefully examine it from

all points so as to ensure the ultimate successful launching of the Institute for purposes of original research in science and philosophy Mr. Barjorji Padsha who had been deputed to go over all the principal Western Universities was appointed Secretary. The committee consisted of all good men and true, perfectly competent to advise Mr. Tata. Of course, till the scheme was consummated, there had been some changes in the personnel. But the task which this committee of all the talents, as we might say, had before them was most onerous and responsible. It took some years of no little labour and weariness to mature it on a practical basis, both from the academic and financial point, in order to submit it for the favourable consideration of and support by the Indian Government. Those were years of the greatest anxiety to Mr. Tata personally who was keen on the establishment of the Institute at the earliest date possible. Many indeed were the vicissitudes to which the scheme was subjected and many a protracted correspondence had gone on between him and the Imperial authorities at Calcutta. It was first informally laid before Lord Curzon when he arrived in 1898 in Bombay to assume the

office of Viceroy. One of the difficulties to be solved was the place where the Institute should be located. Naturally, of course, Mr. Tata preferred Bombay, the city of his life long activities. There were many matters involved in choosing the right site. A site was required which would every way meet the wants of the Institute. At one time it was almost understood that Trombay (an island near Bombay) may best be suited but the water difficulty there was one not easily to be overcome without a very large expenditure. It had to be unwillingly abandoned. Bangalore was ultimately chosen. Then long negotiations followed with the Mysore state, specially as to certain financial aid which had been found to be absolutely essential. It is, however, unnecessary in a short memoir of this character to refer to all the other difficulties that one after another cropped up, as the scheme matured and was examined by more than one authority. There was also another lion in the path to be reconciled. The Government of India while applauding the patriotic ardour which prompted Mr. Tata to found the institute and give thirty lakhs was not satisfied that its maintenance could all be

should guarantee a sum not exceeding Rs. 8,000 for ten years and deposit securities which might yield that amount. Of course, the resolution minutely declared how the institute should be managed and how the board of management and control should be constituted. The principle was Mr. Travers, a well-known scientist recomme ded by the distinguished professor Mr. Ramsay who had taken infinite trouble in giving his most friendly advice to Mr. Tata in order to place the institute on a solid and permanent basis. The curriculum was broadly divided into three sections, namely, (1) Scientific and Technical; (2) Medical; and (3) Philosophical and Educational. Laboratories, Libraries, museum, and all other essential appliances for research work were also to be fully provided, so that the institute may start for work, when ready, fully equipped. It is a matter of profound regret that Mr. Tata did not live to see the fruition of his most cherished and life long object. But it is a source of the highest gratification to know that his two sons along with the Trustees worked heart and soul to complete that which had been left unfinished; and not a little of the praise is due to the late Lord Minto, during whose

sympathetic and statesmanlike viceroyalty this great work came to be accomplished. It may be said that the Tata family owe a lasting debt of gratitude personally to Lord Minto who was so greatly instrumental in crowning the edifice of this institute as he was in advancing a great practical stage the two other schemes which will now be immediately referred to. Lastly, the name of the institute was finally adopted. It was called the "Indian Institute of Research." The actual work of teaching was begun in 1910–11, but owing to some new difficulties of internal management in connection with the teaching staff, it was, greatly obstructed. It is to be deeply regretted the actual progress which the people of India had anxiously anticipated, has hitherto been no where. The committee of management had had many anxious months of trouble and complications to overcome. Happily, these are on the point of being finally removed or have been removed, thanks to the personal sympathy, tact and judgment of Lord Hardinge the present Viceroy. It is therefore to be fervently hoped that the future of the Research Institute will be untroubled and that India could be able to witness in a few years the

beneficient fruit of the great tree which the foresight, wealth, and patriotism of Mr. Jamsetji Nusserwanji Tata first planted in 1898.

It remains now to refer to the two great industrial enterprises on which Mr. Tata had embarked namely, the iron and steel manufactory and the utilisation of water power for industrial purposes by means of electricity. The earliest of these was the project of converting the rich iron mines of Chanda in the Central Provinces of India into making pig iron and steel. The project was not only a colossal one. It was one of the greatest ventures almost new to India which had been taken on hand; iron smithing as an industry was unknown to the people. For ages past they had worked at it; but in the most primitive way. For a long time it was even thought that there were no rich ores of iron underneath the surface to work. But that belief was dispelled with the gradual progress of the geological survey of India systematically taken by the Imperial Government. To Sir Henry Holland, late Chief of the Survey Department, are due in a large measure, the variety of mining and other concession granted to private persons in recent years. Mr. Tata

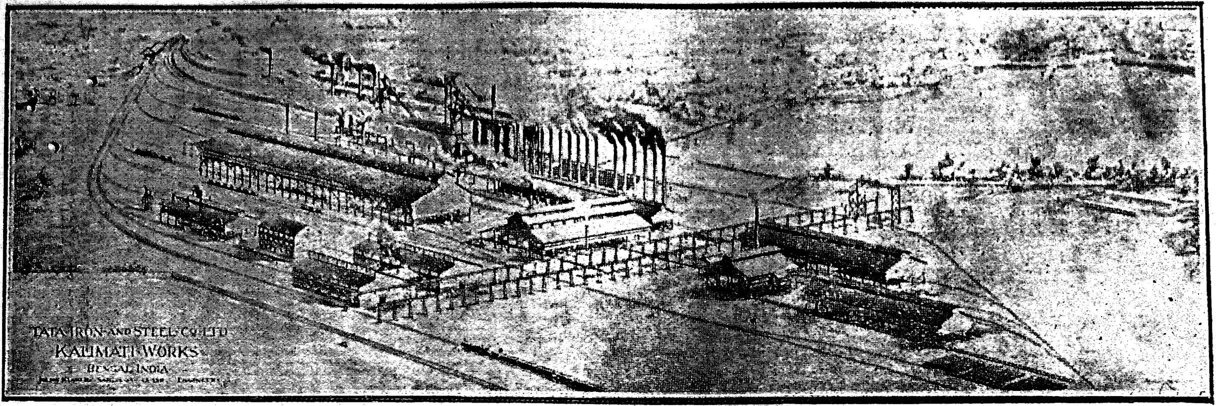
from 1875, had been constantly endeavouring to explore a mine which may be so extensive and rich in areas as to allow a commercial venture to be made profitable alike to himself and the country. Here, too, the pioneer work done by Mr. Tata was infinitely arduous but it was done with that patience, care and business insight which were so characteristic of him. It is unnecessary to detail minutely all the preliminary work he underwent. Suffice to say, that having consulted many experts and other authorities, and spent a considerable sum of money on exploration work, the scheme was so far advanced in its preliminary stage as to give all hopes of ultimate success. Some more spade work of an important character remained, but as the fates ordained it the hand of the Reaper cut off that man of courageous enterprise just as he was on the point of making a good practical beginning. Here, too, the sons took up the thread of the scheme where their father had left it. It was herculean work, which might have appalled even the most venturesome. They were quite new to it. They deemed themselves so many babes. But the spirit of filial devotion inspired them with a courage and perseverance which

stood them in good stead and enabled them three years after to announce to the industrial world of the project for purpose of execution. In 1907 they formed a joint stock company with a strong and influential Board, inviting the public to subscribe the needed share capital which was fixed at 2·31 crore Rupees. There were 2 lakhs of ordinary shares of Rs. 75 each, giving a capital of 1½ crore; 50,000 cumulative 6 per cent. preference shares of Rs. 150 each amounting to 75 lakhs; and amounting 22,500 deferred shares of Rs. 30 each to 6·75 lakhs. The company was named "The Tata Iron and Steel Company." It may be interesting to refer to some of the salient extracts of the prospectus. The company was formed "for the purpose of creating in India blast furnaces, open hearth steel furnaces, rolling mills, coke ovens and other plant necessary for the manufacture of pig iron, steel rails, bars, plates, &c.," and then follows a most pregnant paragraph which informs the public how the company came to be formed. "The late Mr. J. N. Tata of Bombay some years ago began researches to ascertain if it could be possible to establish an industry for the manufactory of iron and

steel in India on a large and profitable scale and after four years labour, during which Mr. J. N. Tata and his successors at their own expense conducted a private geological survey of considerable areas in India very large deposits of high grade iron ore have been discovered in proximity to coal of suitable cooking characters for the manufacture of pig iron at a very low figure." One of such deposits, which came to be eventually selected, was in the territory of the Maharaja of Morbhun. Of course, it goes without saying that the needed mining concessions were obtained from the Government of India and the Board of the Bengal Nagpur Railway give a reduction in freight permits for all materials and plant required for construction and on all raw materials for conveyance to the works. More, the Government of India undertook to purchase from the company at import prices 20,000 tons of steel rails per annum; colossal as the enterprise was and innumerable as the difficulties at start were, it is indeed highly gratifying to record that owing to the indomitable energy the management by Messrs. Tata and Sons and the highly intelligent co-operation of the Directors themselves men of enterprise and

capital business capacity, the herculean job was accomplished most successfully. It is indeed a great object lesson to all men of wealth how a well thought out scheme, of vast benefit to the country, could be launched and successfully worked by means of a well equipped organization consisting of a galaxy of men of expert knowledge in applied science. This vulcan like factory, is now at work for the last two years and its latest report shows what has been accomplished. It verily marks an epoch in the industrial history of India at the opening of the twentieth century under the civilising and progressive influence of British Indian administration. In the report of 1912–13, the Directors informed their proprietary that the net profits till the end of 30th June 1913 had amounted to Rupees 8·58 lakhs.* This for a company just commercially working the factory is indeed most creditable. But as the report says a further amount of capital expenditure is essential in order to give to the share holders the profits arising from its full productive capacity. This has not yet been reached but it may be depended

* The report of 1913-14 recently published gives the net profit at nearly 23 lakhs.



Bird's-Eye view of the Tata Iron and Steel Works, Sakchi.

upon that it will be reached in another two or three years redounding to the credit of all concerned. The Tata Iron and Steel Works are by far *the* one largest and most profitable industry thoroughly established in this country for which the people's warmest gratitude is due to the great pioneer.

Coming to the other large enterprise it may be observed, as has been readily acknowledged, that the original idea of harnessing the waters of the Western Ghauts for utilising them as a power was communicated to Mr. Tata by a local engineer, of sagacity and keen observation, the late Mr. David Gostling. Like the idea of the other scheme, it was long revolved and revolved by Mr. Tata before bringing it to a practical head. And indeed it is a lucky circumstance for Bombay that the evolution of the scheme should have been so well considered by Mr. Tata during his life time. In his opening speech, on the occasion of the ceremony of laying the foundation stone of the duct at Lonavla by Lord Sydenham in 1911, Sir Dorab J. Tata, the eldest son of Mr. Tata, observed as Chairman of the Tata Hydro-Electric Power Supply Company that though his father was not the

first to recognise the adaptability of the Ghaut fall of waters for utilising it as power, Mr. Tata had the matter prominently before his mind for nearly thirty years before his death. He was convinced that the utilisation of this kind of power, so common in the west, would prove of the greatest industrial value. It was while he was in the look out for an eligible site for his Empress mills near the Jabbulpore marble falls which led him first to utilize water power for industrial purposes. However the idea did not take any practical from till 1897. In that year an old expert friend, who was connected with a European local firm whose former brokers were the firm of Mr. Tata, offered him the option of bringing up the concession of the power to be obtained from the Doodh Sagar falls at Goa. This led to a mature consideration of the ultimate value and utility of the falls of the Western Ghauts in preference to those near Goa. And an examination of all the physical and scientific facts led to the resolution that the falls of the Western Ghauts were immensely inferior. Mr. R. B. Joyner C. I. E. who was one of the earliest expert consultants, had described the value of them in a small

leaflet from which some interesting sentences may be reproduced. Those will enable the reader to fully apprehend the reasons which led to the final selection. " This natural and regular phenomenon, with the 2000 feet height of the Ghaut valleys above, and not far off Bombay is the origin of this large and important project. It has hitherto always been thought that Cherrapunji in the Khashia Hills (Assam) had the greatest rainfall in the world, but in the catchment area of the lakes for this scheme over 546 inches have been measured in one monsoon of which 440 inches (nearly 37 feet depth) fell in 31 consecutive days. Cherrapunji has very rarely measured so much rain, and then only during 5 or 6 months. The flat valleys with their solid rockbeds are, too, most admirably adapted not only to store large quantities of water, but also to retain such." This fundamental physical fact of the superiority of the Western Ghauts valley to that of Cherrapunji was, of course, the determining factor, let alone the vicinity of such an extensive entrepot of commerce, and the gate of Asia as Bombay City. But Mr. Joyner's further observations are exceedingly informing. "As the storage of large volumes

of water is expensive, the Lonavla Dam, will serve to turn the rain direct from the clouds to the turbine and so be converted at once into electric power." Its exceeding commercial value may therefore be easily gauged. But it is not necessary to enter here more minutely into the early history and inception of the project which may be best read in the opening speech of Sir Dorab to which reference has already been made. The scheme is to bring the waters of the Western Ghauts from their catchment area to the edge of the Khandala plateau, thence to Khapoli, which will give a head of water of 1740 feet which is considered to be one of the largest in the world. By means of turbines, the fall would generate electrical energy which would be conveyed in a receiving station to Bombay by over head transmission lines whence it would be distributed to industrial and commercial centres in the city. According to Mr. Joyner "When giving 1,00,000 horse power the water passing down the pipes from the great height will equal in volume the whole summer flow of the river Thames." The turbines working the dynamos and transformers will

convert the electric power into high tension to enable it to pass along the copper wires on lofty steel towers for forty odd miles to work the many mills and other industries of Bombay. Not only will the grand project give enormous power to Bombay at a much cheaper rate and of a better driving quality than now obtained from steam power, but it will also give once more pure air to a beautiful city now enriched with an unhealthy cloud of filthy smoke, and it can also give an enormous supply of the purest water for drinking purposes, or this water may be used to irrigate 30,000 to 40,000 acres of vegetables, fruit and other crops close to the market." It will be seen that the potentiality of the works, when completed, are great. Though only a fractional number of the mills has agreed to buy power from the company, aggregating 30,000 H. P., it may be assumed that as experience is gained and progress made, all the available power will be profitably utilised. The foundation stone of the Duct was laid at Lonavla in February 1911 and it was expected that the first instalment of the power would be supplied in April 1914; but owing to both engineering and labour difficulties, it would be some months

yet before the power can be utilised. It is a matter of regret that this project, too, Mr. Tata left incomplete. However, the sons deserve all credit for the exceeding trouble they have undertaken to bring it to a successful completion with the assistance of Mr. A. J. Billimoria, the third man of great ability who had been with Mr. Tata for years and whose financial talents were recognised by him at a very early date. The financial part was also at first not a little disappointing. Attempt to raise capital in London was made but without any success. After all, the capital of 2 crore Rupees has been provided by India herself, and, we are rejoiced to observe, that a considerable part of it has been subscribed by the more wealthy Native States in Western India and elsewhere. The larger that indigenous capital comes out from the hoards, lying uninvested in this country, for great industrial purposes of a variety of character, the greater will be the pace at which industrial evolution transform the whole face of the country. Genuine *Swadshi* enterprise, well conceived, well matured, and well founded on a practical basis is bound to succeed in this country. Then alone will the dry bones in the

industrial valley begin to be galvanized into life, and India will throb with the pulsations of hundreds of useful organisations. In this respect Mr. Tata, as a great pioneer has led the way and it is to be fervently hoped the impetus his two beneficent projects have given to Indian industrialism will be steadily maintained and even accelerated. The three institutions described in the chapter form an imperishable monument to the talent, foresight, and patriotic prudence of Mr. Tata. Epoch making as they are in their character, they are certain to endure and confer lasting benefits on his countrymen for generations to come.

THE LABOUR PROBLEM FOR COTTON MILLS.

WHEN the Dharamsi mill was purchased by Mr. Tata in 1886, it was rechristened the Swadeshi. Among many internal difficulties of working at the outset, there was none so formidable as the one of obtaining an adequate number of operatives. It was resolved, on a careful examination of the soundness of the various machinery, boilers and engines included, that some looms and a large number of worn out spindles would have to be thrown out to be sold as scrap iron. The necessity of having a new engine of modern type was also recognised. But the principal initative was the casting away of wellnigh 40,000 out of 100,000 spindles. To work the number retained demanded a fair number of operatives, besides reelers. The mill was in a district away from the centre where operatives mostly resided. It was in Coorla which is nine miles away from Bombay and under the jurisdiction of the Tanna Collectorate. The condition of factory labour in

1886 was parlous in that locality. Only one other cotton mill was there namely the Coorla Spinning and Weaving Company, Ld., whose agents were Messrs. B. A. Hormusji & Co. Coorla in those days was notorious as the haunt of robbers and incorrigible gamblers. And it is an absolute fact that many a mill jobber, who had been thrown out of employment by the long stoppage of the mill under the old employers, beguiled his idle hours in gambling. A few of these and some workpeople no doubt went to Bombay. But the rest remained unemployed. The gambling jobbers had under the old *regime* become masters and used to levy all sorts of blackmails from the poor operatives and steal away many articles from the unprotected and unguarded open compound of the mill. Practically, then, the situation, when Mr. Tata started this old and ruined mill for work, was that there was no adequate number of steady going operatives and jobbers. There was a large demoralised class of work people who preferred either to eat the bread of idleness or maintain themselves by thieving and gambling. Coorla was notorious as the nest of all the worst characters of Bombay in gambling and other

crimes. Immense difficulties confronted the management in this respect. Strikes were of frequent occurrences; one or two of them were of a most threatening character. The weavers were almost all Julai Mahomedans exceedingly riotous and mischievous. With them were combined the unruly lot of the fierce and fighting Mahrattas. In vain did Mr. Tata try to attract the largest number of the class to the mill by the most persuasive means. All efforts proved futile and it was heart rending to see, day after day, machine after machine remaining idle for want of the necessary workpeople, while the management was putting forth a veritably herculian effort to cope with what then looked like a white elephant. Agents were first sent to Broach and next to Surat to bring operatives of a steady character from those places, none offering themselves from Bombay city itself. It is one of the salient features of Bombay factory labour that the workpeople of one district would never move to another even if better and more remunerative employment could be found in the other district. The feature still survives. But in 1886, it was most striking. Again, as more mills were multiplying in the

city, the unemployed were always able to find employment on the spot. So that there was next to none available for the Swadeshi. Even when a steady jobber, after hard hunting, could whip in a gang, it was discovered that they had left in groups of three and four within a week or fortnight. Those brought down from Broach and Surat were no more satisfactory though provided with free lodgings and an additional *douceur* to stay. They would all return to the two places whence they respectively came. At last Mr. Tata bethought of immigrant labour from the North West Provinces of those days, the same which are now known as the United Provinces where labour was cheap and over abundant. The Famine Commission of 1880 had left it on record that the surplus population pressing on the means of subsistence in Provinces over crowded should be found employment elsewhere. The Imperial Government was doing its best in the direction suggested by the Commission, so that when another severe famine recurred, they may not starve. An anna per day was enough to keep this population of the United Provinces alive. Mr. Tata thought it would be a good move to

get a fraction of the day labourers there to immigrate to Bombay and earn six annas instead of one per day. In a way the problem of an over crowded population pressing on an exhausted soil for subsistance would be solved. At any rate a beginning would be made. The idea was perfectly sound and every way practical, only Mr. Tata had not counted on some of the peculiarities of the human equation in India, one of which is the stolid unwillingness of a population to move even fifty miles from their native place to earn a better wage than the starving one. That idiosyncrasy even after a quarter of a century and more is still to be witnessed and it is a serious problem whether it could ever be removed. It is a socio-economic phenomenon which hardly finds a parallel in any other part of the civilized world. Mr. Tata, however, took courage in both his hands with his characteristic wont and resolved to address Sir Auckland Colvin the then Lieutenant Governor of the United Provinces on the subject. So on the 8th August 1888, a long communication explaining the difficulties and requesting co-operation in the matter, was written to that distinguished administrator and able financier. At the

same time a copy of the letter along with another and more elaborate-in the preparation of both of which the writer of this biography had a hand—was forwarded to the late Sir Dinshaw M. Petit, the then Chairman of the Bombay Mill Owner's Association. In this long letter,dated 31st August 1888, Messrs.Tata and Sons pointed out the difficulties which mill owners in Bombay would certainly find in the matter of the supply of factory labour in future as more mills multiplied, and suggested the practical steps which, it was essential, should be taken from them in order to remove those difficulties. How timely was the warning and how sound was the suggestion could be clearly perceived by the mill owners who have been crying out against the shortage of labour for the last five years and upwards. Unfortunately, the Association, at that time, signally failed to realise the difficulty and respond to the note of warning that had been so well sounded. The only response which that remarkable letter received from the Association was that the law of supply and demand would adjust itself and that therefore no action was necessary ! Reading by the light of to-day, when the great inadequacy of labour has been

staring in the face of the millowners in the city, it would seem, barring a few factors which were, of course, then undreamt of, that the sagacious forecast made by Mr. Tata in 1888 almost amounted to a prophetic vision which, however, was light heartedly disregarded by his most influential co-workers in the line Mr. Tata was far in advance of them. To think ahead of a contingency most probable to occur was not a text which they could study with advantage. It was deemed a superfluity to seize time by the forelock and be fully prepared for the emergency to arise. Sufficient for the day was the evil of the shortage of factory labour. The shortsightedness of the brother mill owners was such that they allowed the morrow to take care of itself after the manner of the Faithfuls who live, move, and have their being in *Kismet*. The clear vision of rocks ahead which presented itself to Mr. Tata was denied to them. The faculty of prevision was woefully wanting. But the millowner of to-day will certainly appreciate what that man of sagacity and clear vision had forecast in his letter twenty five years ago. That letter is so striking in the arguments urged therein that it does not seem to have lost even an iota of

their force even after such a long lapse of years. And it, therefore, requires no apology to find a place for it in these pages, as it offers a valuable contribution towards the difficult problem, the solution of which has been engaging so much attention at this very hour. How suggestive and practical it is, the reader will no doubt be able to discover for himself on a perusal of the text :—

COPY.

THE IMPORTATION OF LABOUR FOR THE BOMBAY MILLS.

THE SWADESHI MILLS CO., LD.
Bombay, 31st August, 1888.

JOHN MARSHALL, ESQ.,
Secretary, Millowners' Association,
BOMBAY.

Dear Sir,

As we believe that the question of an adequate supply of labour commensurate with the expansion and growth of our staple industry is engaging the attention of those vitally interested in its prosperity, we think the time is not inopportune if the Committee of the Association would take the matter into their serious consideration with a view of

adopting betimes some decisive measures for ensuring such a supply.

Members of the committee cannot be unaware of the difficulties met in obtaining a sufficient supply of operatives by owners of some of the new mills that have within the past few months been started for work. The scarcity of young persons to work the ring frames, which are now steadily replacing the old throstles in many mills, and even the mules in certain cotton factories, is admitted, and it is simply a question of time when even adult labour may be a desideratum, especially if the next few years are to witness the same progressive rates of the development of the industry which we have all observed since 1882-83. No doubt, as in other industrial matters so in this, the law of supply and demand must eventually regulate the growth of cotton mills in and around the city. The belief seems to be general that the increase in the number of mills can only be limited by the capacity of China and Japan to absorb their annually increasing products. *When* that limit may be reached is a problem, considering the fact that Indian Yarns have only within the past few years

established a firm hold on the outskirts of the Chinese Market. There is the vast inland population of many Millions which must yet tap our yarn trade, provided we maintain the strength and superiority of our products over that of all other foreign competitors. If the two countries continue to take up our yarn at the rates they have been doing for the last five years, then it may be taken for granted that more mills will rise in our midst and add to their yearly increasing number. Depression of trade, war or famine or both are undoubtedly the disturbing elements in the way of future growth and expansion. And we must also reckon with the possibilities of keen competition from known or unknown quarters, though hitherto Bombay has distanced all such. But making due allowance for these disturbing factors, which are more or less common to all the trades in the world at different periods, we think it will be readily admitted that there is ample scope in the near future for new cotton mills.

Hence, if our industrial prosperity is to be maintained, it is the duty of all engaged in the industry, to take time by the forelock and provide against *at least one important* contin-

gency which, far above depression or wa
or famine, may seriously threaten it.
anything like a fair margin of profit is
accrue to the investors in mill shares, th
primary question of labour should be we
considered.

It is superfluous to observe that the wag
allowed to operatives are higher to-day tha
they were 10 years ago. And it stands
reason that even higher rates may have to b
allowed as the demand for both skilled an
unskilled labour grow apace with the indu
trial development daily to be witnessed aroun
us.

We leave out of consideration for the presen
the dearness of the new staple and of fue
though a moment's thought will inform us a
how these determining factors may swee
away, along with dear wages, even ba
margins of profit. We do not mean to impl
that all the unfavourable conditions will exis
at one and at the same time, though it
apparent that any two of them may co-exi
and threaten mill companies with heav
losses. Aye, even the losses may engulf th
weaker concerns into ruin if meanwhile pol

tical complications lead to further adverse conditions.

We are no alarmists and it is far from our intention to submit to the Committee an alarming picture of what may be the condition of the industry under certain unfavorable circumstances above described. Our object is simply to apprise the Committee that, situated as we are at present, it would argue want of ordinary commercial foresight were we to leave out of account the many disturbing elements which at any time may partially or wholly retard the prosperity of the industry. And, as we have said before, no question seems to be deserving of more attention at this juncture, when prospects all round seem to be good and the disturbing factors almost non-existent, than this question of the steady supply of labour.

It seems that the recruiting grounds are more or less certain tracts in the Konkan and a few places in Gujrat. It is, however, a question, how long may such recruiting places be available in the future, bearing in mind that the industrial growth is not only to be witnessed in the city but in all parts of the Presidency, North, South, East and West. No

doubt, Bombay being the centre of all trade and the port of transit nearest to Europe, a larger number of the unemployed will find their way here. But it should be borne in mind that the older operatives are now getting educated and beginning to have a faint glimmer of their true position in the industrial development. They pretty freely know when to strike and when to demand higher wages. And as they grow in strength and in the perception of their rights it is not unlikely they may prove as much a source of trouble and anxiety as the operatives in Lancashire and elsewhere. We fear there are many chances of larger number of strikes by and by and it would be prudent to provide against their occurrence so far as it may be possible for the Millowners to do. *Combination and dear labour* are the two rocks a head of which millowners ought to steer clear.

Fortunately, we think, millowners can provide against both if they bestir betimes and take all precautionary measures. Dear labour from the Konkan and elsewhere may be partially obviated by importing the cheaper labour of tracts where it is well known there are large masses of the unemployed—the field

y-labourers of the Upper Provinces. There e wages do not go beyond an anna per diem. ɔw if by a judicious scheme which the ›mmittee of the Association may be able to aw up a fair percentage of such unemployed e, with the aid of the Government, brought wn to settle here in each and every mill cording to requirements, we would have ken one good foward step. It is needless to ate how anxious is the Government of India find some employment for the many millions ho go on half a meal a day from year's end year's end.

We also know of the difficulty which the overnment meets in its benevolent efforts at amigration.

If by some scheme, at once feasibile and mple, we could help Government, in however nall a way, to solve the great economic roblem staring it in the face, and to which the amine Commission has drawn its prominent ttention, we would not only render a useful ervice but serve our own common interests lso. If the Association could formulate some ractical plan of utilising the cheap labour of he N. W. Provinces and Oudh, it would solve he difficulty to some extent. It shall provide

as our industry is still young and takes time to reach the age of vigorous manhood, it is needful to watch its progress and do all in our power to foster its permanency. Private enterprise, no doubt, can put forth its best exertions, to make labour available at a fair price, in harmony with the law of supply and demand. But at the same time we are also of opinion that at this stage, and for some time to come the state might be appealed to assist private enterprise in this direction. Whatever help and facility the Government may afford will be most valuable. It will be *auxiliary* to our own efforts, and in suggesting in this place the assistance of Government we ask for nothing but auxiliary aid. We are confident that if the subject is approached from an impartial and unprejudiced stand point, the Committee will agree with us in the propriety of the kind of assistance invoked, and take some practical steps with that object in view.

Roughly, our idea is, that as this is a subject affecting the common interests of millowners, the Association should undertake to open negotiations with the Local Government for the purpose, and submit for its approval a practical working scheme which the Commit-

tee or the general body of members may consider desirable to adopt after mature deliberation. The principal features of such a scheme, should, in our humble opinion, be :—

(1) The approximate number of people that may be necessary annually to import.

(2) The responsibility of bringing them down and the cost of conveyance, &c. (We think the responsibility should be with the Local Government, but the expenses should be borne by the millowners, in proportion to the number they may respectively take up).

(3) The drawing up of a quarterly or half yearly report under the joint signature of the Factory Inspector and the Secretary of the Association, giving details of the employment on which the persons are put; their general character for skill and work and the average of wages earned. These returns may be discontinued after 3 or 4 years when the necessity for further Government interference, essential at the commencement, may be uncalled for.

We have placed these few observations in a crude form for the consideration of the Committee, fully believing that for the common interests of those concerned, they will see fit to give them that attention which they deserve.

We enclose copies of the correspondence that has passed between us and the Government of the North-West Provinces, on the same subject.

We are, Dear Sir,
Yours faithfully,
(Sd.) TATA & SONS,
Agents.

COPY.

THE SWADESHI MILLS CO., LTD.,
VICTORIA BUILDINGS,
Bombay, 21st July 1888.

To

THE SECRETARY TO GOVERNMENT,
North-West Provinces and Oudh,
ALLAHABAD.

Sir,

We have the honour to request that you will be so good as to lay this letter before His Honour the Lieutenant Governor with a view that he may be pleased to give its subject

matter a favourable consideration, and promote the welfare of one of the staple industries of this country by rendering the assistance that is herein humbly sought.

His Honour may, perhaps, be not unware of the strides which the local cotton industry has taken during the past few years. Moreover, it is unnecessary in this place to call his attention to the details of the export trade in cotton twist and piece goods manufactured by mills in the Bombay Presidency. It is to be presumed that his Honour after having till late held with marked ability and credit the portfolio of Indian finance, is fully conversant with the statistics of Bombay exports in indigenous products. Suffice to say that there are now 55 Spinning and Weaving Mills in the city alone with a paid up and loanable capital of very near 7 crores of Rupees, and that these factories employ on an average of 45,000 work people to work about 15 lakhs spindles and 13,000 looms. Virtually, the employment of nearly half a lakh of operatives means the maintenance of two lakhs of souls, counting a family as consisting of man and wife and two children. More mills are in course of construction and more are projected. In fact

it may be taken for granted that the capacity of development is only limited by the demand for Bombay Mill products. If China and Japan continue to absorb Bombay yarns and cloth in the same growing rates that they have been absorbing for the last five years, there is no saying to what limit the trade may expand.

One great reason of recent development may be traced to the improved machinery which is now being imported into India. It is beginning to be felt that ring throstles can spin, not only average 20s. but even higher counts. Wherever the spindles have been used production has been larger, almost double of what was possible under the old class of machinery. As far as we can judge at present by the light of our own knowledge and experience, it may be observed that ring spinning is the industry of the future for Bombay, and that its capacity or turning out goods of finer counts with ordinary Indian Cotton is undoubted. As years advance, and as further improvements are made in this machinery, it is not impossible that Manchester may have to undergo a keen competition with Bombay in the finer classes of yarns and piecegoods also.

So much are ring throstles in demand

that manufacturers find it difficult to execute orders within a reasonable time. There is not a mill in Bombay which, having recognised the suitability and increased productivity of ring spinning is not replacing its old machinery by this. But while millowners find it to their advantage to introduce machinery of the latest invention and makes, they are beginning to feel on the other hand the scarcity of the labour needed to work these machines. This labour question threatens to prove a grave one for the industry at no distant day. In fact the want of young persons who can work ring frames is beginning to be felt. And it is only a question of time *when* even *adult* labour may arrest the further healthy development of our growing industry, which is not only finding employment for lakhs but actually increasing the wealth of the country. It is gradually solving that burning economic problem of the day—how to enable India to accumulate capital.

Under the circumstances it has been thought by many who have paid some attention to the subject, ourselves among the number, that it would be an advantage if Bombay could import some labour from the provinces over

which his honour now presides. That it is the economic law to find labour in the cheapest market cannot be denied. And inasmuch as the economic condition of agricultural labourers in various parts of the country is acknowledged to be far from satisfactory, and having regard to the fact that the Imperial Government is anxious to improve such a condition of affairs, namely by finding employment, especially industrial employment, for large masses who are scarcely able to earn an anna or two per day—having regard to the necessity for finding employment for these as even suggested by the Famine Commission, we believe it would be an advantago alike to the local industry as to the people of such classes if by some well considered arrangement the desired object could be attained. Immigration of labour from a province where there is scarcely employment for the majority to localities where there is, is also admitted. In fact emmigration is infinitely better than emigration, though we are not unaware of the difficulty which certain local administrations find in inducing their unemployed to immigrate.

Still we are of hope that His Honour's

Government would be partially helping to solve the problem if he could be so good as to consider this matter and see how far labour from his provinces might be transplanted to Bombay. It is well known that day labourers do not earn on an average more than an anna or two, whereas mill-operatives earn at the very least six annas per diem. Young persons earn as much as 8 to 11 Rs. per month; while adults earn from 12 to 20 Rs. and even Rs. 25. Thus the average maximum reaches as high as 11 and 12 annas per day.

Undoubtedly it is an experiment, the one we here respectfully beg to submit for his Honour's consideration, but we are of conviction that under proper safe-guards and guarantees as to the protection of the immigrants, it is certain to succeed and thus partially solve the problem Government has in view for years past–a problem which according to the papers, is even now engaging the attention of the authorities. The first few batches of men, women and young persons, who may be willing to move here under certain guarantees, can be well cared for and protected till by slow training they are able to earn as much as the

Bombay operatives. And as they get confidence, and as repòrts reach from time to time of their prosperity to their native home, it is not unlikely, we believe, that a stream of the unemployed surplus population will thus continuously find its way here.

For these considerations which we think, to be for the material advantage of millowners, labourers, and the public alike, we respectfully urge the matter for the favourable consideration of his Honour, and hope that with his unique experience of the Provinces, his accurate knowledge of the economic conditions and wants of the country, and especially of agricultural classes, and his broad and statesmanlike views on questions having reference to the material development and prosperity of the empire at large, he will be able to render that assistance which is here sought, not for our private interests, but for the interests of the industry itself and for those through whom alone the industry can be successfully carried out.

We shall be glad to formulate the form of the assistance in all its details should his Honour desire. We have purposely refrained from doing so here until we are in a position

to know the views which his Honour may entertain on the subject.

We have the honour to be,
Sir,
Your most obedient servants,
(Sd.) TATA & SONS,
Agents.

SOCIOLOGY AND PUBLIC AFFAIRS.

It would be an error to suppose that because the best part of his life was devoted to the material progress of the country, that Mr. Tata bestowed no attention to social and public affairs. The greater welfare of his compatriots in those matters was not less dear to him. But immersed as he invariably remained in those larger and more arduous spheres of activity there was little time left to devote himself to questions of social and political welfare.

Naturally his interest in them was more academic than active. Mr. Tata was a person who fully understood the value of time and how it could be best utilised. He subordinated affairs of secondary importance to those which must imperatively engage a greater portion of his busy time. One thing at a time and that done well was the golden rule with him as it has been with many others of his constitution and temperament. It is needful to say so much because it is a fact that when some person or persons engaged him in con-

versation on grave problems of public affairs such as the budget or the drink traffic of the state or railways and irrigation or land and agriculture or education and politics, how they were surprised to discover what fund of knowledge he possessed on all these subjects, and how well he understood their respective outstanding features, and how competent he was to enter into an arena of prolonged discussion. In matters of public finance Mr. Tata, it goes without saying, had a very clear head. He would intuitively seize on its weak points and lay them bare with convincing proofs. On the Exchange question, when it was hotly discussed in view of the closure of the mints, he was quite *en rapport*. Though he may not have studied economics in the abstract, he could argue on any given economic subject by the light of his practical experience and that with such logic and commonsense as to carry conviction home. Indeed on any controversial subject there was no hairsplitting or quibbling with him. It was spade wielded against spade and that with all the vigour of the man of clear vision. It was always a pleasure to hear Mr. Tata in an interesting debate when all his best qualities of common

sense and reasoning were to the fore, and that mixed sometimes with mirthful satire which in itself was exhilerating. With reference to the closure of the mints, he was, of course, a stout opponent. And so much was he impressed by the grave error which the Government of India committed in 1893, that he felt it his duty to place his own views before the British Public in a long paper which the *Statist* did him the honour of printing as a supplement. That economic Journal, from its own independant point of view, had entertained the same view as Mr. Tata. He thought that the enactment of 1893 would render India the greatest harm which only many years of adjustment could obliterate. That it would decidedly hit the mass of the cultivators and that it was every way a most unsatisfactory piece of legislation which was introduced only in the interests of a class, the foreign traders, who were hard hit by the low exchange which was every way so beneficial to this country and which not a little stimulated many an industry, specially jute, cotton and tea. But the battle of silver and gold has been fought out and it is of no use referring to the controversy in this

M. ... MALABAR HILL BOMBAY

place. However from what has been said above, it would be plain how whole heartedly Mr. Tata would launch himself in the discussion of a grave public question, when demanded, with all his wonted vigour and force of argument.

Similarly, in another matter, but only of local importance, he took up his cudgel against the Goliaths of land revenue settlement in 1900-1. The then Collector of Thana had recommended the Bombay Government a scheme of raising the wind in reference to agricultural land in Salsette which might be utilised for building purposes. The scheme was extremely onesided, namely to advantage the government at the expense of the agriculturists and the builder. The result would have been, in case the scheme was carried out as originally recommended, that Salsette as a suburban locality could never have developed and every obstacle might have been put in the way of populating it for the purpose of relieving the over crowdedness of Bombay. Here again, Mr. Tata perceived at a glance what folly the Collector was committing and therefore addressed a long letter to the government on the subject, pointing out the onesidedness and disadvantages of the scheme. Some further

correspondence ensued and Mr. Tata was successful in obliging government to modify the original project.

Mr. Tata was well up in matters agricultural specially those relating to the cultivation of the merchantable products such as cotton and silk.

In regard to cotton cultivation sufficient reference has already been made in a previous chapter as to the efforts he put forth to stimulate the cultivation of Egyptian cotton and to teach indigenous growers to alter their method by following the Egyptian system. He was passionately interested in sericulture for which purpose he had been more or less in communication with his Japanese friends. He had made many an experiment in Mysore which is specially adapted for growing silk. Indeed on his return from a visit to Japan, Mr. Tata was inculcating among his numerous mercantile friends the extreme importance of following some of the most successful methods of cultivation pursued by the Japanese. He talked in most enthusiastic terms about the Japanese farmer who was every way a superior one in point of

intelligence, patience, and unmitigating hard work to the Indian ryot. He also used to wax eloquent on the problem of irrigation and manure. The Chinese and the Japanese, in his opinion, better understood the incalculable value of both, infinitely better than the so called experts of our public works and agricultural department. With simpler but common sense and practical methods, established successfully after ages of experience, they were better irrigationists and agriculturists. Their agricultural economy too was far superior to any to which the British Indian government can lay any claim. On the whole his views on irrigation and agriculture were of a sound and practical character, and it is a pity that Mr. Tata did not expound them for the general benefit of the country in his own exhaustive way as he had done in reference to matters industrial. But, perhaps, he shrank from the task, knowing well the ways of the government which considers itself so omniscient and self sufficient as to require no outward light from any quarter. Perhaps, that is the reason why even to day, with all its belated efforts, it is still far behind in

stimulating agriculture in which the United States are such adepts.

Mr. Tata was also personally very fond of horticulture. He freely indulged in this taste without any stint of money. The result of such gardening pursuit was best to be noticed at Navsari, his native town, where he organised on his own private land a miniature botanical garden which had more than a local fame. Having been a traveller all over the world he used to import many a shrub and plant from distant places. Indeed he was passionately fond of rearing exotics as experiments. In this respect he resembled more or less the distinguished philanthrophist of his own energetic and enterprising community who flourished in the latter part of the first half of the nineteenth century in Bombay. The late Mr. Framji Cowasji was very well known in his days for the extensive botanical garden he had formed in his village at Pawai, not far from Vehar. He, too, grew a variety of exotics and was indefatigable in rearing foreign plants with a zeal and energy which are rarely to be seen among his coreligionists to-day. Perhaps it may not be known that Mr. Tata was strongly in favor of growing strawberries

as to make them an universal fruit in India. At least he had such a project in his mind as his valued and old friend, Sir George Birdwood, informs the writer.

Again in the matter of the Excise policy of the Bombay Government Mr. Tata was a strong opponent. Though he did not directly remonstrate with the government, he never was backward in assisting with all the means in his power, those who were trying to mitigate the habit of drinking among his country men. He was entirely at the opposite pole to the Excise authorities in respect of the long fought controversy touching raw toddy, which is an innocuous spirit and healthful when drunk fresh. On this subject he was in harmony with the views of the biographer who had indited a series of letters on the subject in the columns of the *Bombay Gazette*, then so ably edited by the late Mr. Grattan Geary and his assistant, Mr. T. J. Bennet, now one of the principal proprietors of the *Times of India*. Mr. Tata's sympathy and support were entirely given to the advocates of temperance reform. Thus it came to pass that he unobtrusively seconded the strenuous efforts of the Salvation Army in Bombay at whose head was the

accomplished Mr. Booth Tucker now the Chief Commissioner in all India. Similarly he gave his warm support to the late Mr. W. S. Caine whose name is a household word in India with all classes of politicians and specially with Temperance reformers. He was always ready with his purse to further the cause when demanded and as what he gave with his right hand his left hand never knew, it is not possible to gauge the extent of the pecuniary assistance he rendered to all those who appealed to him in that good cause. In private circles Mr. Tata never missed condemning the vice of drink whenever occasion offered.

On the poverty of India too he entertained views not dissimilar to those of Mr. Dadabhoy Naoroji and his school which may be said to embrace almost the whole of India. A good round hater of all shams and hypocrisies, Mr. Tata with his enquiring mind and observant eyes, was no believer in the opposite doctrine, namely that the economic policy of the British government in India has been uniformly of a character to produce prosperity rather than impoverishment.

Lastly, a glimpse and a glimpse only,

may be given here of Mr. Tata as a politician. His range of political views was as wide as that he took of industrial ones. They were indeed broad—based upon and greatly matured by his extensive travels almost over all parts of the globe and by his free and easy table talk with a variety of men and women he met. There was no insularity about him. He was in reality a citizen of the world. As such he was able to grasp the true trend of any political event or problem with the same powers of keen insight which were so conspicuous in matters industrial. It might emphatically be said that he belonged to the school of progressive politicians. As such his views on current politics were most pronounced. With him there was no gadding about, no attempt, overt or covert at casuistry, and no sophisticated arguments. To those wedded to obsolete dogmas and catching shibboleths, he was indeed a kind of heretic. Plain and plump, he would blurt out, what he thought of a given situation or question after fully cogitating in his mind. But once the judgment was formed there was no mistaking it. There was no departure there from. He did not belong to that class of men in politics

who are denominated "opportunists." He had no personal ambition and no favours to ask. Neither did he ever concern or worry himself with the frowns of the high and the mighty. If a political measure needed to be condemned, he condemned it outright. There was no mincing matters with it, and he would argue out his own conviction with the customary vigour of thought. Sometimes he would appear to be too brusque but that only revealed the depth of the intensity of his conviction. And his innate cynicism was to be seen most transparently where cant served the purpose of serious politics. His contempt of cant was great. From one who had been educated in the institution bearing the honoured name of Elphinstone—a statesman of the greatest broadmindedness and liberality of thought—it was not to be expected that in his mature age he would hold views other than those inspired by the spirit of genuine Liberalism. An advanced liberal as he was and chastened by cosmopolitan politics, he was nothing if not progressive. Indeed it was the spirit of deep interest in politics and public affairs which was engendered in him by his western education that ultimately

inspired his great industrial enterprises for the welfare of the country.

It might therefore be imagined what his horror was of reactionary measures in this country and of the robust reactionaries themselves who in matters political, would, if not restrained by Parliament, fain set back the hand of the political dial. This is no revelation. His opinion was well known to those who were intimately associated with him all their lives. None was thus more closely associated with him than Sir Pherozeshah Mehta. Indeed the unchallengable fact was openly declared by him in that eloquent and memorable speech he made on the occasion of the ceremony of unveiling Mr. Tata's statue by Lord Sydenham on the 12th April 1912. He began his speech by observing that he "believed there was no person now living who knew the late Mr. Tata so long, so closely, and so intimately" as he did. He was a close and intimate friend from his early days and during the whole time both "were associates together in public and private life." "To know Mr. Tata as he really was" observed, Sir Pherozeshah, "it was necessary to recognise the equipment with which he started in life and

which shaped his career from the beginning to the end." And the following is his clear pronouncement on the particular topic here dwelt with. "The current notion that Mr. Tata took no part in public life and did not help and assist in political movements was a great mistake. There was no man who held stronger notions on political matters and though he never could be induced to appear or speak on a public platform, the help and the advice, the co-operation which he gave to political movements never ceased except with his life. And the proof of this statement lay in the fact that Mr. Tata was one of the foundation members of what might be called the leading political association in the Presidency—the Bombay Presidency Association. And not only was Mr. Tata himself the foundation member of the Association but he induced his old father to go and do likewise." Here then is the unimpeachable testimony of one who is the foremost leader of political thought in India. Beyond adding my own testimony to that fact in my capacity as honorary secretary of the Association for the last thirty years, I may myself state here from my personal and close connexion with the Congress movement

during the same long period, in more than half of which I was the Honorary General Secretary, that Mr. Tata was not only a staunch friend of our 'Unconventional Convention,' as Sir Pherozeshah has rightly termed it, but that he also unostentatiously supported it with his purse. And it goes without saying that he was more or less in great sympathy with the national movement and its constitutional agitation touching various administrative and economic reforms, the most important of which are already accomplished facts. It is well known that he was a generous contributor to the funds of the British Committee of the Indian National Congress. Indeed it may be stated here on the authority of Sir Pherozeshah that Mr. Tata thought him (Sir Pherozeshah) not half so radical as himself in his political views. Testimony such as this puts it beyond the shadow of a doubt that Mr. Tata took an active part in politics. The misconception which may seem to have been sedulously fostered that Mr. Tata held aloof from politics is baseless. It should be given the go-bye it deserves after the testimony referred to above. Versatile as Mr. Tata's talents were it would have been an injustice

to him to allow this error to be any longer perpetuated. The patriot who materialised India in matters industrial was not so out of his patriotism for the great advancement of the political welfare of his countrymen.

ONE OF INDIA'S "GREATEST SONS."

THIS brief narrative of the memorable career of Mr. Jamsetji Nusserwanji Tata is now brought to a close. To his grateful countrymen, in every part of this great peninsula, it is a matter of profound regret that a person of his talent and foresight, his clear vision, and indomitable resolution, his perseverance and energy, his courage and enterprise, should have been cut off at the very time when the prospects of witnessing the fruition at an early day of those great and matured projects the seeds of which his ardent patriotism had sown with the unremitting care and attention of the experienced gardener were so hopeful. That event was denied to him by an unkind fate which cut off his career in the very fulness of his manhood at the age of 65. For some months before his death he was ailing from cardiac affection. Under medical advice he was recommended to go to Europe for a change and treatment. He left Bombay

midst the many good wishes of the members of his family and numerous friends in January 1904 for the restoration of his health. A sad calamity overtook him in March in the death of his wife; and he himself breathed his last at Nauheim, in Germany, on the 19th May of the same year, his eldest son, Sir Dorab, and his cousin, Mr. Rutton D. Tata, being the only relatives present at his side. The news of his untimely death filled his countrymen with sorrow. They bemoaned the loss India had sustained by his demise. In Bombay, the city of his life long activity, it was felt to do not only honour to his memory but commemorate it in a permanent form. A requisition signed by all the leading representatives of the various communities was addressed to the Sheriff to convene a public meeting to record the loss and take steps for a permanent memorial. The meeting was held in the town Hall under the presidency of Lord Lamington, then Governor of Bombay, and was attended by an unprecedentedly large number of people of all classes and their most honoured representatives. Sir Lawrence Jenkins, the learned and most popular Chief Justice of Bombay, who was a close and

intimate friend of Mr. Tata, was the principal speaker and moved the first resolution recording the sense of the loss the citizens had sustained in his death, in the most eloquent and appreciative terms which found a deep echo in the heart of every unit of the audience. He paid a glowing tribute of sincere admiration to the many notable traits of Mr. Tata's character and eulogised his munificence which was so productive of good to his countrymen, his catholic sympathy, his unaffected simplicity and his pure disinterestedness wholly free from that sordid ambition of acquiring honour and decorations which in these demoralised days has greatly scandalised Bombay and sullied the fair fame of philanthrophy pure and undefiled. To speak without the language of flattery or exaggeration it may be said of Mr. Tata that he took no thought of aught save Right and Truth. Honours he discarded. Wealth and Honour, as the poet has said, are "baubles to the wise." Wealth was regarded by him, as his son, Sir Dorab, truly observed in his speech at Lonavla "as only a secondary object in life." It was held subordinate to his constant desire to advance the greater moral and material prosperity of his country.

Sir Lawrence Jenkins observed that his close relations with Mr. Tata and the privilege of the friendship he had enjoyed gave him "an opportunity of learning how great the man really was." It is true to say he was great in the greatness of the use of his wealth and great by virtue of his unaffected grace and simplicity. "In his private life," said the same eloquent and learned speaker, "he was the sincerest of friends, while his wide experiences made him the most delightful of companions." Verily, in the company of his friends at a dinner or some social gathering, Mr. Tata was a most enlivening anecdotist. To us all it is also further loss that there had been no faithful Bozwell to record those sparkling anecdotes, a rich variety of which he had garnered in his memory while visiting countries far and near and from all societies enlightened and unsophisticated, rich and poor in which he freely moved and mixed. The present writer himself can recall to memory how he used to wax eloquent on the many merits and virtues of the Japanese after his three months' visit to that progressive country from which he was able to bring many new ideas not only of ease and elegance

of comfort and convenience, but of industrial and commercial value, some of which he afterwards put into execution. A born humourist, he could not only relish humour but would be the means of provoking humour in others. And "what shall we say," observed Sir Lawrence Jenkins at the meeting "of his public life? His energies found no outlet on the public platform. He was essentially a man of action. He strove for realities and was not one to let down empty buckets into empty wells." A more delightful metaphor and yet true to nature could not have been selected to describe exactly in a few words the essence of Mr. Tata's public life as it struck that English friend. Mr. Tata though often asked to speak on a public platform invariably refused to do so. Not because he could not make either an eloquent or commonsense speech. Indeed with his fluency of tongue in private conversation and his vivacity, he might have been an acquisition at any public assembly. Neither had he nervousness about him. It was a constitutional ordinance which he always observed. Only once in the experience of the writer, he broke that self denying

ordinance, and that at the express pursuasion of that most eloquent orator, his valued and esteemed friend Sir Pherozeshah M. Mehta. Once in his life he opened his lips on a public platform at a crowded meeting in the Town Hall. He seconded a resolution in one laconic sentence and resumed his seat! In this respect he may be said to have surpassed the single speech Hamilton of parliamentary fame. Further observed Sir Lawrence "It was a remarkable character of Mr. Tata that while his mind was capable of the largest projects nothing was too small to interest him. He was ready at all times to assist merit and honest effort and there are those among us who owe their attainments or distinction in no small measure to the aid Mr. Tata gave them in their student and struggling days. Wealth came to him in full measure but he remained to the last a simple modest gentleman seeking neither title nor place and loving with a love that knew no bounds the country that gave him birth!" In these words, so chaste and so well chosen, Sir Lawrence Jenkins faithfully mirrored the entire character of Mr. Tata to which all who knew

him personally and closely would not doubt bear ample testimony.

It would be superfluous to enlarge this brief memoir by a reference to the other eloquent speeches made by representative citizens at the public meeting. These could be read in the text of the proceedings which is appended to this booklet. It would be learned therefrom how one speaker after another strove to add his tribute of admiration to the many virtues and merits of the deceased. It may, however, be pardonable to refer to the few weighty and thoughtful words which fell from the lips of Lord Lamington, the President, who though personally unacquainted with Mr. Tata, fully recognised and endorsed all that has been said by the various citizens of light and leading. His Lordship remarked that "all the speakers brought prominently forward two striking features of Mr. Tata. The first one was his businesslike philanthrophy and I do not suppose that there has ever been a citizen in the Indian Empire who has done more valuable service to his country than Mr. Tata has in this respect. He has shown how by a man's talents and also by the produce of his talents he is able to benefit the public. The second

feature of his character is his own unostentatious and strict simplicity. He turned his wealth into channels to fructify and do good to his fellow citizens." This was the moral which Lord Lamington pointed out to the assembled citizens of Bombay. It was an object lesson to be learned by heart by those who, like Mr. Jamsetji N. Tata had a measure of abundant wealth. Wealth must always be a means to an end, the end being the greater happiness of those who were less fortunately situated.

That the life work of such a great Indian should be commemorated for all times to come was indeed natural and the enthusiasm which inspired the meeting was therefore unbounded. It was resolved to invite subscriptions for raising the permanent memorial. As a result the executive committee was able to collect a sum nearly approaching half a lakh. The subscribers subsequently met to determine the form of the memorial and it was unanimously resolved that a statue of Mr. Tata would be most suitable. A small committee was appointed to carry out the object of the donors. They entrusted that work to a well known English artist. At last a site was given by

the Government and the ceremony of unveiling the statue befell the lot of another Governor of Bombay who also was greatly impressed by Mr. Tata's life work and his mighty projects in the advancement of which he had rendered yeomen's service which the sons have gratefully acknowledged in public. The unveiling ceremony took place on the site where the statue has been erected, opposite the handsome architectural buildings of the G. I. P. Railway Company on the 11th April 1912. It was witnessed by a magnificent assemblage of ladies and gentlemen of all classes and creed. Here, in requesting Lord Sydenham to unveil the statue, Sir Pherozeshah M. Mehta made an eloquent speech in which, as the oldest and closest friend, he portrayed some other features of Mr. J. N. Tata beyond those with which the public had been made familiar at the Town Hall meeting. While bearing full testimony to his stirling worth, his genius, his catholic and useful philanthrophy, his force of character, high standard of commercial integrity and, above all, to his beautiful simplicity, Sir Pherozeshah observed:—To appraise at its true and full value the life work of the man we must look to the equip-

ment with which he started in public life and which moulded his character through out. The foundation of his huge moral purpose and his philanthrophic public spirit were laid deep in the literary or as you prefer to call it—liberal education—that English education which had commenced to be given in the later forties of the last century and which was one of the most precious gift bestowed by British rule in this country." Truer words were never more eloquently and wisely spoken. For it goes without saying that it was the liberal education which Mr. Tata received at the Elphinstone College which all throughout his public life inspired him. Sciolists of our later days have without book attempted to disparage that education, though to the calm, reflective, and philosophic mind it is plain that what goes vulgarly by the name of industrial or technical education is truly impossible without the broad and deep foundation of a sound liberal education as is understood in its best sense in the seats of Higher Learning all throughout the civilized west. Sir Pherozeshah further observed "As Lord Lamington had once justly pointed out no body would have retreated from the

notion of a statue more than Mr. Tata himself but the statue that was to be unveiled was raised not only for the purpose of honoring the memory of Mr. Tata but also to serve as a beacon light to successive generations of his countrymen to follow in his footsteps." And well did Lord Sydenham, who had never seen Mr. Tata, concluded his well balanced eulogy of him by observing that " in him the scientific use of the imagination was happily combined with an infinite power of taking trouble which is not too common in India. Such a combination implies genius and no one who attempts to follow the work which Mr. Tata accomplished will deny him that rare attribute. India in the past has produced men distinguished in many branches of human activity but the application of the spirit of the West to meet the needs of the East has found no greater exponent than Mr. Tata." Here we may fittingly end the life and life work of Mr. Tata, one of the greatest sons of India. Imagination not only in science but human affairs is a great stimulus, an unbounded inspiration to action and Lord Sydenham rightly observed how Mr. Tata combined in him his natural gifts with this quality of an

ardent imagination. The root ideas which his youthful imagination had entertained were never allowed to slumber. They were slowly nurtured and developed so that in the fulness of time he might give them unfettered wings for purposes of practical action. Though imaginative he was no empty dreamer. Life to him was no dream. Life was real, Life was earnest as the great popular American poet has sung. His visions were of a practical character which at the right psychological hour he was able successfully to realise, satisfy his own patriotic ambition, and render lasting good to his countrymen. His visions were a kin to those described by a well known English poet;

> " Our visions have not come to naught
> Who saw by lightening in the night
> The deeds we dreamed are being wrought
> By those who work in clearer light."

The visions seen by lightning in his early youth Mr. Tata converted in the bloom of his manhood into glorious deeds with the clearer light of the sun of his natural prosperity. He was one of those architects of fate who work

in the walls of Time. And time, the teacher, will point his works to generations of Indians in order that some one of them in turn may take heart, follow in his wake and render other equally beneficial service to their country. In India, on which industrial and intellectual regeneration has but recently dawned, men are apt to be discouraged by the thought that they cannot emulate the strenous energy and activity of the west by leaps and bounds. Every step towards a realisation of that happy goal is, however, slow. It can only be reached by examples of the perseverance, patience, sagacity and moral courage of men gifted as Mr. Jamsetji N. Tata was. He has left footprints on their path leading to the great goal which can only be reached by slow and measured steps.

> "We have not wings, we cannot soar
> But we have feet to scale and climb
> By slow degrees, by more and more
> The cloudy summit of our times."

That is the priceless lesson which is to be learned from the life and life work of the great Mr. Jamsetji Nusserwanji Tata.

THE J. N. TATA MEMORIAL

ITS INCEPTION AND COMPLETION

BOMBAY'S PUBLIC TRIBUTES TO A GREAT CITIZEN.

A PUBLIC meeting, convened by the Sheriff on the requisition of a number of citizens, was held at the Town Hall, Bombay, on Tuesday, March 28th, 1905, for the purpose of taking steps to provide a suitable memorial to the late Mr. Jamsetjee Nusservanjee Tata. There was a very large and representative assembly and the proceedings throughout were marked with great warmth of feeling. His Excellency the Governor (Lord Lamington) had kindly consented to preside and on his arrival was met by the Sheriff, Mr. Sassoon, J. David, and other gentlemen, and conducted on to the platform which was handsomely decorated with plants and draperies. His Excellency was accompanied by the Private Secretary, Mr. J. H. Du Boulay, and among others present on the platform, or in the body of the hall, were: Hon. Sir Lawrence Jenkins, Kt., Chief Justice; Sir Jamsetjee Jejeebhoy, Bart.; Sir Dinshaw

M. Petit, Bart.; the Hon. Sir P. M. Mehta, K.C.I.E., Sir Jehangir Cowasjee Jehangir, Kt.; Sir Balchandra Krishna, Kt.; Sir Hurkissondas Nurrotumdas, Kt.; the Hon. Mr. Justice Badrudin Tyebji, the Hon. Mr. Justice Chandavarkar, Mr. Sassoon J. David; Mr. James MacDonald, the Rev. Dr. D. Mackichan, Mr. David Gostling, Mr. A. K. Leslie, the Hon. Mr. G. K. Parekh, the Hon. Mr. Ibrahim Rahimtoola, the Hon. Mr. Vithaldas D. Thackersey, the Hon. Khan Bahadur Darasha R. Chichgar, Messrs. R. M. Patel, L. N. Banaji, R. D. Sethna, Jehangir Dossabhoy Framji, Hormusji Dadabhoy, P. H. Dastur, D. E. Wacha, N. F. Moos, J. A. Wadia, M. C. Murzban, K. R. Cama, Nurrotumdas Moorarji Goculdas, Dharamsey Morarji Goculdas, Vijbhucandas Atmaram, the Rev. Father Dreckmann. Messrs. Cumroodin Amiroodin Abdul Latit, N. J. Gamadia Jehangir B. Petit, Byramji N. Seervai, N. N. Saher, Drs. K. E. Dadachanji, N. N. Katrak. Messrs. Faiz B. Tyebji, Hussen B. Tyebji, D. N. Bahadurji, Ruttonsey Mulji, J. J. Modi, Fazulbhoy Currimbhoy Ibrahim, Fazulbhoy Joomabhoy Lalji, Rustomji Pestonji Jehangir, and others. The Sheriff read the notice convening the meeting, with the citizens' requisition, and on the motion of Sir Jamsetjee Jejeebhoy, seconded by Sir Hurkissondas Nurrotumdas, His Excellency the Governor, who was received with an enthusiastic greeting of

applause, was voted to the chair. His Excellency expressed the satisfaction it had given him to accede to the request made to him to preside at this august meeting, which, he hoped, would turn out to be a practical one. His Excellency then called upon the mover of the first resolution.

AN ELOQUENT TRIBUTE.

THE HON. SIR LAWRENCE JENKINS said:—I have the honour to move, in the terms of a resolution placed in my hands, "That this meeting desires to place in record its deep sense of the heavy loss sustained by all India, especially Bombay, in the death of Mr. J. N. Tata, who throughout his whole busy career was actuated by an earnest desire to do everything in his power to advance the welfare and development of the country in all directions. In all the great industrial enterprises, which he undertook he had this object always in his mind, the greatest manifestation whereof was in his magnificent proposal to found an Institute of Research, to which he has devoted a large share of his immense wealth and which will always remain an undying monument of his patriotism, public spirit, and princely liberality." This motion is one which I feel sure this meeting will readily adopt, for though close on a year has elapsed since we had occasion to deplore the loss of one of the greatest, in some respects perhaps the

greatest, of India's sons, this has been from no lack of appreciation of Mr. Tata's worth. To many it may have seemed that there has been a needless delay, but all, I think must be agreed that as events have turned out this delay has been fortunate, for we have thereby gained the advantage that we now know that the scheme he had so much at heart and with which his name will ever be associated, has received official recognition and approval coupled with the promise of liberal support. We who knew Mr. Tata well, and realized his deep and unwavering conviction that this Research Institute would help to open up new avenues of employment and thus secure prosperity to the country and its people, cannot reflect without regret on the fact that he has not lived to see this result; but he reposed, and rightly reposed, in his sons, a complete confidence that they would make it a sacred duty of their lives to carry to its consummation the scheme which his sagacious mind had projected. This is not the time or place, nor, indeed, am I qualified to enlarge on the results he anticipated; but we know this, that it was no hare-brained chimera that he proposed, but a practical scheme directed to definite ends, and formulated with the aid of the ablest advise that could be obtained, and that Mr. Tata was inspired with the firm belief that it was by the application of the teaching of science through the medium of this

Institute that the resources of the country could be best developed. Though my acquaintance with Mr. Tata was necessarily far shorter than that of many here this evening, still it was my good fortune soon after my arrival in Bombay to meet him, and the relations between us quickly ripened into those of close friendship, and that a friendship, which, on my side at any rate, was sincerely valued, and will ever remain to me as a treasured remembrance. Those relations gave me an opportunity of learning how great a man he really was. In his private life he was the sincerest of friends, while his wide experiences made him the most delightful of companions. And what shall I say of his public life? His energies found no outlet on the platform, he was essentially a man of action; he strove for realities and was not one to let down empty buckets into empty wells. And so the record of his public life rests largely on the commercial enterprises he undertook: the founding of the Nagpur Mills; the war of frights he waged on behalf of industrial Bombay; the introduction of superior qualities of cotton plants; and the steps he took towards establishing iron and steel industries in the Central Provinces. But what will continue as the most enduring monument of his strenuous life will be the Research Institute that will owe its being to his inspiration and munificence. Still, great as these

achievements were, they form but a part of the good work he did. It was a remarkable characteristic of Mr. Tata that, while his mind was capable of the largest projects, nothing was too small to interest him. He was at all times ready to assist merit and honest effort, and there are those among us who owe their attainments and distinctions in no small measure to the aid Mr. Tata gave them in their student and struggling days. He believed in the capabilities of his countrymen and was ever ready to help in developing their talents. He was endowed with a wealth of sympathy, and yet perhaps in this connection he shared the lot of great men, which so often is to be misunderstood. It is true he did not fritter away his means on those miscellaneous purposes, eleemosynary and the like, with which he felt in no way linked, and this may have led those imperfectly acquainted with his methods and ideals to ascribe to him a quality that was no part of his real nature; for he acted in obedience to a truer instinct of which a great thinker has written in the striking words: "I tell thee thou foolish philanthropist, that I grudge the dollar the dime, the cent I give to such men as do not belong to me and to whom I do not belong. There is a class of persons to whom by all spiritual affinity I am bought and sold; for them I will go to prison, if need be, but your miscellaneous popular charities —the education at college of fools; the building of

meeting houses to the vain end of which many now stand ; alms to sots ; and all the thousand fold relief societies ; though I confess with shame I sometimes succumb and give the dollar, it is a wicked dollar which by and by I shall have the manhood to withhold." And so it was with Mr. Tata : this manhood was his. (Loud applause.) I have spoken of Mr. Tata's sympathy ; and in this I use no empty phrase ; for it was a living force with him. I myself have seen his eyes fill with tears when speaking of the poor and the hardships of their lives. His own career was one of marked success ; and that success was not the mere outcome of fortune's favours, but the symbol of his own qualities, his clear vision, his constancy of purpose, his uprightness and his vigour. Yes, he had a vigour that was contagious, and had its influence on those who assisted him in his various works. Wealth came to him in full measure, but he remained to the last what he was by nature, a simple, modest gentleman, seeking neither title nor place, and loving with a love that knew no bounds the country that gave him birth. The expression of our feelings may be late, but the recollection of him, whose memory we are met to honour this evening, is still fresh with us ; and it is right that this representative meeting of the citizens of Bombay should, by the adoption of the resolution I have been asked to move, give

utterance to the expression of public sorrow at the loss sustained in Mr. Tata's death.

MR. TATA'S UNIVERSALITY.

THE HON. MR. JUSTICE B. TYEBJI, in seconding the resolution, said :—Your Excellency, Ladies and Gentlemen,—It seems to me that it is not necessary for me to trespass on your patience by any lengthy speech of my own. But I desire to take this opportunity of saying a few words in testimony of the esteem, regard and admiration in which Mr. Tata was held by all classes of the people of India for his many virtues, both of the head and of the heart. Mr. Tata's great abilities as a man of business, his high capacity for organization, his wonderful insight into the economic necessities of this country, and the means by which he sought to improve and strengthen our ancient industries, and to introduce new ones into India are universally acknowledged and do not require any words from me. His simplicity and his charm of manner combined with his strong common sense and his vigorous personality impressed every one who came into contact with him. His idea of starting and endowing a Research Institute is a fit and convincing example of Mr. Tata's character. It is not merely the largeness and munificence of his gift which we admire, but it is the originality of the plan which his

mind had conceived, and which, we must all regret he was not able to carry out in his own lifetime. And, ladies and gentlemen, I, standing here as representing the Mussulman community, desire to bear testimony to the breadth of Mr. Tata's sympathy, which was in no way confined to his own community, but extended to all classes of his fellow-countrymen regardless of caste or creed. Mr. Tata's character reminds me of the words of the Persian poet, who exclaimed, "What am I to do, O ye Mussulmans, for I know not myself? I am neither a Christian nor a Jew, neither a Guebre nor a Mussulman. I belong not to the East or to the West. I come neither from Iran nor from the land of Khorasan." But there is this difference between the poet and Mr. Tata, that while the poet declared that he belonged neither to the East nor to the West, we can truly say that Mr. Tata's deeds and achievements proved that he belonged both to the East and to the West. His enlightened and practical enterprises, his broad-minded philanthropy, his large-hearted charities made him quite as much a citizen of the West as of the East, quite as much a Mussulman as a Zoroastrian. And, I further venture to say, ladies and gentlemen, that Mr. Tata's plain, simple but vigorous and benevolent life, illustrated by many deeds of enlightened charity, had endeared him quite as much to the Mussulman and the Hindu communities as to his

own. He was quite as much admired by the people of Bengal as by those of Bombay, by the people of Madras as by those of the other Presidencies of India. Indeed, he seems to have had before his eyes, and to have steadily carried out the ideal set by a famous Persian poet, who said: "Live thou, both towards the good and the bad, in such a way, O Urfli, that after thy death, the Mussulmans may claim thee as their own, and may wash thy body with the water of the Zemzen, while the Hindus may claim to cremate thee as one of themselves and venerate thy ashes." Such a character, such a personality, is rare amongst us, and it is necessary to keep it clearly before our eyes and perpetuate his memory for the benefit and guidance of ourselves and of our posterity.

SIR BHALCHANDRA KRISHNA said :—Your Excellency Ladies and Gentlemen,—I have the melancholy duty of supporting the proposition, which has been so eloquently proposed by the Hon. Sir Lawrence Jenkins and so ably seconded by the Hon. Mr. Justice Tyebji. They have left very little for me to say. Still, as my humble tribute of respect to the memory of that great and good man whose loss not only Bombay, but the whole of India will never cease to mourn, I will venture to make a few observations. Mr. Tata was a great Captain of Industry, not only in the textile branch in which he

undoubtedly held a conspicuous position, but also in the cultivation of excellent silk by cheap Japanese methods and the cultivation of Egyptian cotton as well as the importation of foreign maize to relieve the demand on the cereals of the country in famine times, and in the development of the mineral products of our country. He was, in fact, the architect of his own fortune. When he first started business independently of his father, he met with a reverse which he bore patiently. But during the Abyssinian war his father was one of a firm of contractors, who made considerable profits, out of which he gave a portion to his son. With this capital in hand Mr. Tata started business afresh, and ever since that time he always met with good luck and success in whatever business he did; and his wealth doubled trebled and quadrupled by leaps and bounds. As he went on amassing wealth he gave it away generously in cosmopolitan charity and utilized it in the erection of buildings in Bombay, the best and most admired of which is the Taj Mahal Hotel. He also established educational scholarships for the purpose of helping some of the best graduates to proceed to England or Japan for the purpose of prosecuting their studies there. I may here refer to an impression which prevails in some quarters that Mr. Tata devoted himself solely to industrial business and that he took no part in political

movements. This impression was not borne out by facts. I know as a matter of fact that his patriotism was great and that he took a deep interest in the political welfare of our country. He was one of the founders of the Presidency Association, which was built up on the ashes of the Bombay Association, and his views on political questions were sometimes even ultra-radical, but generally his interest in politics was keen though tempered by sobriety. I believe his success in life was due to two important traits of his character, *viz.*, he was always ready to face the truth in spite of any difficulties, and he was always thorough in what he did. In later life his action has always been marked by high integrity and thoroughness of purpose. This is seen in the battles that he fought in connection with the Commission system in Mill Agency and with the P. & O. for low rates to China. And when there was a hue and cry in Bombay and the mofussil against inoculation with Haffkine's prophylactic serum, he started an inquiry amongst the Parsees with a view to ascertain the truth of the aspersions cast upon the efficacy of inoculation as a plague prophylactic, and the results published, after collecting the most reliable data, fully justified the labour and expense that he so willingly undertook. Some time ago, when he was in England, he had a talk with Lord George Hamilton regarding the depressing effect of excise duty on the

Indian textile production. I am informed that his Lordship maintained that the Indian mills were very prosperous, they earned large profits and they did not suffer on account of the excise duties. Mr. Tata, on his return to Bombay, started a most extensive and thorough inquiry into the question and elicited most valuable statistics and information regarding the condition of cotton mills in India, which proved his contention. When, a few years ago, the Government of his Presidency, in spite of the emphatic protest of a large section of the public, carried through in a hurried manner the Land Alienation Bill, Mr. Tata, was very much upset, because the Government even rejected the most reasonable amendment for postponing the consideration of the Bill for six months, moved by my esteemed friend the Hon. Sir P. M. Mehta, and he started a thorough house-to-house inquiry in different villages in Gujarat into the condition of the agricultural classes. The statistics collected are of a very valuable character but the results have not yet been published. In regard to his iron scheme, the inquiry which was started several years ago has been of a most thorough character. He collected information of a most valuable character on all the different branches of the iron industry spending about three lakhs of rupees, and the results which were only partially published sometime ago, show

that the iron mines in the Central Provinces will afford an almost inexhaustible supply of iron. Then, again, his scheme for the supply of the electrical power from the Ghauts to the Bombay mills, the investigation of which he undertook some years ago and which has been of a most exhaustive character, and is calculated to be twice as effective as the Brush Company's installation, has not yet been completed.

MR. TATA'S GREATEST WORK.

But the *magnum opus* of his life, which will always keep his memory green in India, is, undoubtedly, the Research Institute about the establishment of which the Government of India published a long resolution only a few days ago. In connection with this scheme, again, his thoroughness of action is well marked. At considerable expense he deputed his most energetic and able Secretary, Mr. B. J. Padsha, to Germany and other parts of Europe, with a view to collect all possible information on the subject, which has been of a most valuable character and has been most useful to the provisional committee, which was appointed by him to consider and give practical effect to the scheme. The scheme, as it was first conceived, was of a wider character. But after a great deal of discussion and consultation with many eminent educationists and scientists

amongst them the most prominent being Sir William Ramsey and Professor Mason, it was considerably narrowed to its present form. Up to now he has spent about Rs. 50,000 for this investigation. This institute will always redound to his credit as a cosmopolitan charity. It will promote education in its highest form and will direct the energy of our best intellects into new lines of research which are of the utmost importance to India. The only regret in connection with this Institute, which we the citizens of Bombay feel, is that we shall be deprived of its direct benefits. It was the constant thought and endeavour of the late Mr. Tata and the late Mr. Justice Ranade to form this institution in the city of Bombay itself, or its suburbs, or some convenient district of this Presidency. But it was the force of circumstances which compelled its charitable founder to consent to its establishment at Bangalore. I believe, however, it is not yet too late for Bombay to redeem its honour in this respect. Bombay has always been renowned for its cosmopolitan charity, and I do not think that her ever-flowing streams of charity and generosity have run dry now. If we make once for all a supreme effort to retain this most important and useful institution amongst us, I am sure we shall succeed. I most earnestly appeal to the merchant princes of Bombay and hope that this appeal will not fall on deaf ears or on barren soil. If his

Excellency Lord Lamington should evince the same earnest interest as he takes in the foundation of a museum in Bombay, his Lordship will leave his name and fame to posterity and earn their everlasting gratitude. The Institute will be the noblest memorial of the late Mr. Tata's noble and lofty aims and character, and will for ever serve as a bright example and stimulus to other men of wealth to walk in his footsteps. With these few observations I heartily support this proposition, and hope it will be carried with acclamation. (Applause.)

The Governor put the resolution to the meeting and it was carried unanimously.

THE MEMORIAL COMMITTEE.

THE REV. DR. MACKICHAN moved: "That a Committee, consisting of the undermentioned gentlemen, with power to add to their number, be appointed for the purpose of raising subscriptions, and that their amount be credited to an account to be opened in the Bank of Bombay: and that the object of the memorial he determined at a meeting of subscribers." The names of the Committee were very numerous, having been chosen as thoroughly representative, and Dr. Mackichan read out the following:—The Hon. Sir Lawrence Jenkins, the Hon. Sir James Monteath, the Hon. Sir P.M. Mehta, Sir Jamsetjee Jejeebhoy, Sir Dinshaw Petit, H.H. the

Aga Khan, the Hon. Mr. S. W. Edgerley, the Hon. Mr. Justice Badrudin Tyebji, the Hon. Mr. Justice Chandavarkar, the Hon. Mr. Justice Batty, Sir Bhalchandra Krishna, Sir Harkisondas Nurrotumdas, etc., and as honorary secretaries the Hon. Mr. Vithaldas D. Thackersey, the Hon. Mr. D. R. Chichgar, Messrs. A. Leslie, Vijbhukundas Atmaram, Fazulbhoy C. Ibrahim, F. M. Kanga, and D. E. Wacha." The Rev. Dr. Mackichan said :—The resolution I have the honour to submit follows naturally as the corollary to that which has just received your unanimous and enthusiastic acceptance. You have resolved to place on record your deep sense of the heavy loss sustained by all India, specially Bombay, in the death of Mr. J. N. Tata, who has rightly been described as a citizen of whom the city of Bombay has reason to be proud. But if the expression of our sense of loss and our admiration of the man in whose memory we are met is sincere, it will not stop short at the eloquent tributes which have now been paid to the character and public spirit of one of Bombay's greatest citizens, but will seek a more permanent expression in some memorial worthy of Mr. Tata's name. In commending, therefore, this resolution to your acceptance, I shall attempt to place before you and with as much brevity as possible, the reasons why it seems to me fitting that the public of Bombay should resolve to

endeavour to perpetuate by means of some lasting memorial the Name of Mr. Tata. First of all, we desire this commemoration of his name not because he achieved great success in the accumulation of wealth, but because he set before his fellow-countrymen a worthy ideal of the uses to which wealth ought to minister. Long before his greatest benefaction had been made public he had shown by the efforts which he made to procure for promising young men the highest educational advantages that Europe could offer that he realized the responsibilities that wealth lays upon its possessors and that he valued its possession as a means of helping others. In this he showed the best spirit of the race to which he belonged, a people who in proportion to their numbers have given to the world more substantial proof of their generosity than any of the communities by which they are surrounded. No one can have been long in contact with the Parsi community without being deeply impressed with this as one of their national characteristics, and in this respect Mr. Tata was a worthy representative of his people. But, secondly, underlying this liberality and giving to its characteristic note, was a true patriotism which aimed at placing the people of India on the same level of opportunity with the great nations with whom Mr. Tata had been brought in contact. In his extensive travels his

open eye was ever ready to receive impressions, and with that quick intuition which he was wont to bring to bear on all industrial problems he saw that in the industrial development, of the resources of India lay one of the solutions of the many-sided Indian problem. His active mind was never at rest from the process of revolving plans for industrial development, and these were considered and carried into effect not simply for the sake of business success, but with a higher view to the good of his country. Aims such as these redeem the process of wealth getting from the sordid character which it often acquires, and such were the most prominent aims of Mr. Tata's great enterprises as these presented themselves to those who watched his career as a great captain of industry.

HIS FAITH IN INDIA'S INDUSTRIAL FUTURE.

To some of us the world of commercial enterprise is a somewhat foreign country, but I must confess that I have often listened with an interest which no discussion of mere business enterprise could ever awaken in my untrained mind to Mr. Tata, as he spoke with enthusiasm and with hope of the innumerable lines along which he foresaw the opening of a new industrial future for his country. He was not thinking of his own interest specially in

these anticipations of a greater future, but of the interest of India's people, and we may well claim for him the honour that belongs to the man who is imbued with the spirit of a genuine patriotism. It was, in the third place, quite in keeping with this last characteristic that Mr. Tata, while thus so actively engaged in business and so largely rewarded with the success which waits upon great commercial ability, remained to the end the same simple unassuming genial man that he was in the beginning of his career, before he won the worldly reward of his diligence and enterprise. In another place I recently said that his worldly success did not minister to worldliness. This is the impression that his character left on me in all my intercourse with him, and for one in his position to have so largely resisted the vulgar temptations of great wealth meant the possession of a character of no usual strength and solidity. I have no wish to exaggerate in recording these impressions. I am speaking of our late lamented friend on the business side of his life, and I trust I have shown that he did much by his example to ennoble this department of human activity and to set a high ideal before the business classes of his great city. It would indeed be good for Bombay and for India if we saw rising np among us in these days of quickened prosperity many men of Mr. Tata's type

and it is one of the objects of this memorial meeting to commend for wide imitation these outstanding features in the character of one of Bombay's greatest business leaders. Reference has been already made to that which constitutes a further and a special claim to honoured remembrance at the hands of this city, I mean Mr. Tata's munificent endowment of the Research Institute for India. Of this we can now speak with the utmost hopefulness, for the great liberality which was shown by Mr. Tata has met with a most generous response from the Government of Lord Curzon, generous not merely in respect of the aid which it promises but also in the freedom which it grants to the proposed Institute in management and development. The recent action of the Government of India makes it possible for the institute to be begun on the scale which Mr. Tata desired and hoped for. And here it is fitting that we should express our admiration of the loyalty of Mr. Tata's sons to their father's ideals. They regard it as a pious duty to give effect to their father's most generous intentions, and in this they have shown themselves to be worthy of their inheritance. But we shall entirely fail on our appreciation of the aims of Mr. Tata if we think of his projected Institute as mere handmaid to industrial progress. To Mr. Tata it was a great educational project devoted to the cultivation in

India of the spirit of research. It was originally conceived in the form of a University for post-graduate study. It was never meant to be simply a higher kind of Technical Institute, but a seat of intellectual and scientific culture. The man who conceived such a project showed that he was in touch with the best aspirations of the educated classes in India, that he desired to place within their reach and in their own land the highest means of culture similar to those that are enjoyed by the most progressive nations of our time. I regard Mr. Tata as in reality a great University reformer, one who felt the limitations of present systems and sought to advance beyond them. If Mr. Tata's real aim is thus kept in view and realised in any adequate measure, his Institute will help to raise the tone of all higher education in India. Surely the man who devised such liberal things for his country and by his splendid munificence made it possible for them to be seriously undertaken, has deserved well of his country and especially of the city of which for so many years he was a leading inhabitant. There is just one tinge of regret mingling with our satisfaction as we think of his project that now seems fairly on the way to realisation. As things at present stand, it looks as if the Institute is to have its home in a region remote from Bombay. In Mr. Tata's Advisory Committee I have from the first pressed

the view that this Institute should have its home in or near our city. I know that there are difficulties connected with the locating of the Institute in our congested island and that certain financial losses might be incurred through a change in the location proposed. It would be foolish to allow mere sentiment to interfere to the prejudice of an Institute intended for all India, but if expert opinion should pronounce itself as not opposed to the placing of the Institute in Bombay, I feel sure that our city would worthily endeavour to make good any loss that might arise from sacrificing those advantages which Mysore has, with a praiseworthy enterprise and foresight, offered to the Institute in the event of its being placed in Bangalore. If the question, of location is in the opinion of experts an open question the decision would lie with the public of Bombay. In such an event I trust Bombay would not be found wanting. But I have said enough. I have sought to show cause for the appointment of this Memorial Committee and I trust that the reasons given have served to confirm the impressions, which you yourselves, many of you with ampler opportunities for judging, have already formed. The life that has passed from among us claims this recognition at your hands. Mr. Tata was not a public man in the narrower acceptation of the term. He moved in and out among you with quietness and with modesty, but his

life was in the truest sense a public life, a life devoted to the public interest and fruitful in no common degree of public good.

MR. TATA AS AN IDEALIST.

THE HON. MR. JUSTICE CHANDAVARKAR, in seconding the resolution, said :—Your Excellency and Gentlemen,—Whether we regard Mr. Tata as a man of business, who held the foremost place among us as a leader of industry, or as a public citizen and philanthropist, the distinguishing feature of his life was that his mind, so far from running in narrow grooves, always sought a high plane of thought, and, so to say, swept the farthest prospect of the earth. It has been a common-place remark among us that Mr. Tata's head was full of new ideas. Truer would it be to say that he was a man of inspiring ideals. A still more appropriate term to use of him would be that he was a dreamer. True, the fool also can dream ; but there is this difference. The fool dreams and his dreams die. The wise man or great dreams and dares do, and without dreaming and doing there can be no real progress. Even where the great man fails to realise his dreams, his example, his strife, add so much to the mental and moral stock of his community. Tata dreamt and did, with something of the sight of a seer, because he was pre-eminently given

to taking an intellectual interest in all to which he put his hand. He possessed that subtle power called the intellectual sense which Viscount Goschen reminded his countrymen years ago was essential to industrial as well as other progress of an enduring kind. In other words, I might say without exaggeration that Mr. Tata's greatness among us lay in this, that he heightened commerce, industry, in fact whatever fell within the sphere of his activity, to the dignity of culture. Small incidents mark the man even more than the great events of his life. Some years ago when Sir William Ramsay, the famous scientist, was in Bombay, accompanied by his accomplished wife, Lady Ramsay entertained a few of us with some readings from her favourite poet, Browning, at the house of a friend. The party was select and small and Mr. Tata was of it. After Lady Ramsay had done, Mr. Tata, with the natural simplicity so characteristic of him, took the book from her and read with deep intonation the stirring lines of Browning on "A Grammarian's Funeral." You see the man revealed in that little act—he was a man of business with the insight and the heart of a poet. He had not read much,—but he had more than mere reading can give—the capacity to idealise business and to look at everything from a lofty point of view—not the point of view to those who, priding themselves on being practical, aim

M. R. JAYA... MALABAR HILL BOMBAY

low while they think they are aiming high. We speak of Mr. Tata as a philanthropist. Now. there are different kinds of philanthropy, each inspire by its own motive, each aiming at its peculiar result. There is the philanthropy of self-advertisement. It has its reward. There is the philanthropy of those who give to idlers what they mean for pious purposes. They have their satisfaction. There is the philanthropy of the true and tender-hearted who give of their abundance for distressed and suffering humanity. These undoubtedly have the blessing of God. But Tata's philanthropy was none of these. In its essence it stands by itself among us. If he had been asked, he would have said it was not philanthropy but business. But his well-doing was rich in the saving quality of stimulating the mental and moral activity of his countrymen—of inspiring them with the sense of higher aspiration. There are those who ask—What good will come out of the Research Institute? That institution has yet to come into being—but I see, I can clearly see—those who have eyes to see must see—the good it has done has already proceeded it. Mr. Tata has awakened the cultivated mind of India. The idea of a Research Institute—the years spent in cogitation and discussion—have had and are having an educative value, and the educated youth of the country are now, as it

were, feeling stimulated by the call of this noble soul to go back to the ancient ideal, and scorn delights and live laborious days, and cultivate the spirits of research and learning on even a little rice. Here in my hands I hold a letter from a graduate who has been a Tahsildar for some years. He has come forward with ten thousand rupees which he has saved—and offered his savings to the Institute and has resolved to give up service and devote himself to post-graduate studies. Look again at this—what an education it is to look at and to live in the model cottages and houses which Tata has built and to contrast them with the filthy shawls of greedy landlords, where dirt and disease are as constant quantities as the rent collector. Almost every act of this great man—his conversation, his company, his small acts as well as great—have been an education to his countrymen to aspire high. The service he has rendered to his country—the richest legacy he has left behind him to his countryman, is this—he has stirred faith in us and striven to propagate among us true life in the genuine aspects of loveliness. (Loud applause.)

This resolution was carried.

A vote of thanks was accorded the Sheriff on the proposition of Mr. James Macdonald seconded by Mr. Vijbhukundas Atmaram, Mr. David briefly acknowledging the compliment. Sir Dinshaw Petit

proposed a vote of thanks to his Excellency, who, he said, showed by his presence that the head of the Government in the Presidency was alive to the services of a resident of the city. The Hon. Mr. Ebrahim Rahimtoola seconded the motion which was carried with loud acclamations.

HIS EXCELLENCY, LORD LAMINGTON, who rose amid cheers, said :—I have to thank you, ladies and gentlemen, for the very warm response you have given to the vote of thanks, which was so kindly proposed by Sir Dinshaw M. Petit, and seconded by the Hon. Mr. Ibrahim Rahimtoola. At the commencement of the proceedings of this evening, I think, our friend the Honourable the Chief Justice referred to the delay that had taken place in calling this meeting. As he said, there was a decided advantage in that delay. But I think there is one feature of that delay that even enhances, if possible, the importance of this meeting. This gathering, so far as my experience goes, is, I think, the most notable that I have ever attended in this city. It is numerous and wonderfully representative, and I think, therefore, that the importance of the occasion is strikingly evidenced by the fact that though so many months have elapsed since the death of Mr. Tata, yet the citizens of Bombay have come together in such numbers to support the business to be put before this meeting. It often

happens that immediately after the loss of one who has endeared himself to the public it is simple enough to get people together to take part in the proceedings with regard to some memorial which is proposed to be erected or made in connection with that person's memory. But after such a considerable lapse of time, that there should be a gathering of the character, is, I think, a most striking example of the fact that Mr. Tata's memory is enshrined in your hearts. (Applause.) I myself was reluctant to take any part at all in connection with these proceedings. I felt that it had not been my good fortune to be personally acquainted with that very remarkable gentleman, and I was therefore, anxious that some one who had that good fortune should have presided on this occasion. It was however pointed out to me that if I were to accept this office of chairmanship, I should be meeting with the wishes of those who had the memorial at heart. (Hear, hear.) But I at the same time carefully adhered to my resolution that I should not take the part of a prominent speaker on the occasion, because I felt that it was not for me and that I was not in a position to bring any knowledge of the subject and put it before the meeting. It was, therefore, better that those who were personally acquainted with Mr. Tata should succinctly and concisely put before the meeting what it was proposed

to do in connection with the memorial, and also put before the meeting the many features of the character of this very remarkable man. And I am very glad to think that I have observed due silence, because we have heard at this meeting the most interesting speeches—speeches that have enlightened me and have given extra colouring to the picture of Mr. Tata's life and have enabled me to get a better and more intimate grasp of his character. But still, I may say that all the speakers brought prominently forward two striking features of Mr. Tata. The first one was his business-like philanthropy, and I do not suppose there has ever been a citizen in the ndian Empire who has given more valuable services to his countrymen than Mr. Tata has in this respect. (Applause.) He has shown how by a man's talents and also by the produce of his talents he is able to benefit the public, and it has been well said by several speakers and particularly by the Hon. Mr. Chandavarkar, that he has illustrated that it is not by mere doles easily given that a man really deserves the name of being a true philanthropist. I should like fully to endorse that remark that fell from the lips of Sir Bhalchandra Krishna when he alluded to his great hotel, which was the product and result of Mr. Tata's thought and also of the application of his capital. I take that as a striking instance of the breadth of the man's under-

standing. It was practical in its conception and yet that hotel is a most striking adornment of our very noble city of Bombay (Applause.) He has shown that by the application of wealth to business pursuits, probably, if not certainly, more good is being done to mankind and particularly to the poorer part of mankind and that a greater amount of wealth is being diffused than by handing over large charity grants. Yet, at the same time, as we have been told this evening, he had the true charity of giving assistance to enable others to add happiness to their lives, when instances came under his own personal observation. (Hear, hear.) The second feature of his character that has been given to us to-night is his unostentatiousness and strict simplicity. He turned his wealth into channels to fructify and to do good to his fellow-countrymen. He never cared for his own personal advantage. He never sought any, *quid pro quo* for whatever enterprise he had in hand and for whatever grant he made for some practical object. He did not wish even, as I have been assured on the best information, to have that Research Institute, of which we hear so much, connected with his name. We hear that it is to be a memorial of him and will be a monument to his fame, yet it was his express wish that it should not bear his name, and it is, I think, a most striking illustration of the desire of the man " to do good by

stealth." I may here make a remark about that institution being placed either in confines of the city of Bombay or somewhere in the neighbourhood. I do not know, at this late stage, when the Government of India has clearly laid down the procedure, whether it is too late or not to change the destination of the institution. It is naturally a source of regret for anybody who had the love of Bombay at heart that it should not be placed where I think, it would be most practicably situated and would certainly be immediately associated with the city of Bombay itself. I do not think, as some speakers suggested, that it is so much a matter for a word from me as for those who live in Bombay to make good any deficiency that would result, if it is withdrawn from Mysore. Now, ladies and gentlemen, I can only conclude by saying that at the first sight when we think that there is no character which is so ill-fitted to have a memorial when that gentleman wished to have no recognition in his lifetime, why we should so conflict with his personal wishes almost as to have a memorial after his death. I do not think that it is a question so much of paying honour to Mr. Tata as it is doing good to ourselves. (Hear, hear.) That we not only recognise what he did during his lifetime when now we wish to secure an aftermath after his death—(hear, hear)—that we wish to perpetuate those

qualities that have caused his name to be so universally respected. We wish to have some memorial by which anyone may so comport himself that whether in time of toil or struggle, or whether in time of harvest or success, or whether he is placed in the gaze of the public or in his private life,—he should be so able to comport himself, as to prove and establish himself a worthy ctizen of this great Indian Empire. (Applause.) I have now only to repeat my acknowledgment of thanks for the kindness with which you received that vote. (Applause.)

His Excellency then announced that he had received a letter from Mr. Bomonji Dinshaw Petit expressing his regret that he was not able to be present at the meeting. He was also in a position to say that some one had written to him to say that as a friend he would like to present Rs. 300 in connection with the proposed memorial. The proceedings then terminated.

THE COMPLETED WORK.

HIS EXCELLENCY SIR GEORGE CLARKE, Governor of Bombay, performed on Thursday, the 11th April, 1912, the interesting ceremony of unveiling the statue of the late Mr. Jamsetjee N. Tata on the plot of ground at the junction of Waudby and Cruickshank Roads, Bombay. There were a large

number of leading citizens of Bombay present on the occasion, among whom were: Sir Jamsetji Jejeebhoy; the Hon'ble Sir Pherozeshah Mehta; Sir D. M. Petit; Sir Cowasji Jehangir; Sir Dorab J. Tata; the Hon'ble Sir Ibrahim Rahimtoola; Sir Bhalchandra Krishna; the Hon'ble Mr. G. K. Gokhale; Viscount De Wrem; Mr. Ratan J. Tata; Mr. J. M. Framji Patell; the Hon'ble Mr. Lallubhai Samaldas; the Hon'ble Sardar Davar; K. E. Mody; Mr. Leslie Rogers; Mr. D. E. Wacha; Mr. James MacDonald; Mr. Jamsetji Cursetji Jamsetji; Mr. Narotam Morarji Gokaldas; Mr. N. M. Mandlik; Mr. J. A. Wadia; Dr. K. E. Dadachanji; Mr. P. C. Setna; Mr. V. A. Dabholkar; Mr. J. B. Petit; Mr. R. P. Masani; Mr. S. K. Barodawalla; Mr. N. J. Gamadia; Mr. A. J. Bilimoria; Mr. Kazi Kabirudin; Mr. Amiruddin Tyebji; the Hon'ble Mr. Manmohandas Ramji; Mr. Tribhovandas Mangaldas Nathubhoy; the Rev. Dr. D. Mackichan; and Mr. Dayaram Gidumal. Their Excellencies were on arrival received by Sir Dorab Tata, Sir Pherozeshah Mehta, Mr. Ratan Tata, Sir Jamsetji Jejeebhoy, Sir D. M. Petit, Sir Cowasji Jehangir, Mr. D. E. Wacha and others.

A GREAT INDIAN.

Mr. D. E. Wacha, who opened the proceedings said:—Your Excellency, before Your Excellency is invited to perform the interesting function of this

afternoon, the General Committee of the Jamsetjee N. Tata Memorial beg leave to detain you for a few minutes by giving in this place a brief account of how the memory of that great Indian, who had devoted the best part of his busy life to the greater intellectual and industrial progress of his countrymen came to be commemorated. It was on the 19th of May 1904 that there came from Nauheim, where he had proceeded for the benefit of his health, the mournful news of the death of Mr. Tata, which filled the whole country with deep sorrow. It was universally recognised that in him the country had prematurely lost a practical man of business and courageous enterprise, an unostentatious but utilitarian philanthropist and a sterling patriot of the keenest sagacity. This appreciation of the worth of the deceased was, of course, naturally, most predominant in Bombay, the city of his life-long activities in a variety of directions, but most especially commercial and industrial. It found, later on suitable echo in the requisition which was addressed to the then Sheriff of Bombay by numerous representative and leading citizens of all classes and creeds requesting him to convene a public meeting of the inhabitants in the Town Hall. The meeting was accordingly held there on the 28th day of March 1905, under the able presidency of your distinguished predecessor in Government, Lord Lamington. The

meeting was not only thoroughly representative, but highly appreciative, as was evidenced by the many eloquent speeches made thereat. The Hon'ble Sir Lawrence Jenkins, the then Chief Justice of Bombay, who knew Mr. Tata intimately, had the honour to move the first resolution which ran as follows :—"That this meeting desires to place on record its deep sense of the heavy loss sustained by all India, especially Bombay, in the death of Mr. J. N. Tata, who throughout his whole busy career was actuated by an earnest desire to do everything in his power to advance the welfare and development of the country in all directions. In all the great industrial enterprises which he undertook he had this object always in his mind, the greatest manifestation whereof was in his magnificent proposal to found an Institute of Research to which he has devoted a large share of his immense wealth and which will always remain an undying monument of his patriotism, public spirit, and princely liberality. This resolution was seconded by the late Mr. Justice B. Tyebji, and supported by Sir Bhalchandra Krishna and Sir N. G. Chandavarkar. The Rev. Dr. Mackichan then moved, "That a Committee consisting of the undermentioned gentlemen, with power to add to their number, be appointed for the purpose of raising subscriptions and their amount be credited to an account to be opened in the Bank of

Bombay; and that the object of the memorial be determined at a meeting of subscribers." The names of the Committee were numerous and thoroughly representative, chief among them being Sir Lawrence Jenkins, Sir James Monteath, Sir P. M. Mehta, Sir Jamsetji Jejeebhoy, Sir Dinshaw Petit, H. H. the Agakhan, Sir S. Edgerley, Mr. Justice Tyebji, Mr. Justice Chandavarkar, Sir Bhalchandra Krishna, &c., and as Honorary Secretaries, Sir Vithaldas D. Thackersey, Mr. D. R. Chichgar, Messrs. Leslie, Vijbhookundas Atmaram, Fazulbhai Currimbhoy, F. M. Kanga and D. E. Wacha. Subscriptions were set on foot and large amounts, aggregating Rs. 47,363, was raised not only from Bombay but all parts of India. A meeting of the subscribers was then called in the hall of the Bombay Municipal Corporation on the 9th August, 1906, when the accounts, showing the receipts and disbursements, and a balance in hand of Rs. 46,243 were adopted, and it was resolved as follows: "That the sum available be devoted to raising a handsome and worthy statue of the late Mr. Tata." It was also resolved "that a Sub-Committee consisting of the Hon'ble Sir P. M. Mehta, Mr. R. D. Tata, Mr. Narotum Morarji Gokuldas, Mr. A. Leslie, Dr. A. G. Viegas, Mr. R. D. Setna, Mr. M. C. Murzban and Mr. D. E. Wacha be appointed to carry out the object set forth in the foregoing Resolution." The

Sub-Committee, after considering various sites, selected the spot where the memorial is now erected, the Municipal Corporation having been instrumental, at the instance of the Committee, in acquiring the plot of ground, free of charge, from the Government for which the Committee embrace the present occasion to tender their cordial thanks both to the Government and the Bombay Municipal Corporation. Later on correspondence was carried on between the committee and the two sons of Mr. Tata, who were requested to inform them of the cost of the statue, which was agreed to be in the nature of a monument. Mr. Colton, a well-known London artist, was selected for the object, and the cost was figured at £3,000. This monument, which arrived here some time ago, has been erected in position and Your Excellency will now be requested by the Chairman of the Committee to unveil the bust and reveal to the gaze of the distinguished and representative gathering assembled here the likeness of the great Indian who had rendered such lasting good to his countrymen and who has left footprints on the sands of time which, it is to be earnestly hoped other philanthropists of his courage, enterprise, sagacity and simplicity will follow, advancing the country a stage further towards its moral and material goal. Lastly, the General Committee beg to tender Your Excellency their most grateful thanks for the

readiness with which, in spite of your numerous pressing engagements, you have cheerfully consented to be present here; and also to Lady Clarke for her gracious attendance.

The Hon'ble SIR PHEROZESHAH MEHTA, then requesting His Excellency to perform the ceremony of unveiling the statue, said he hoped he would be pardoned if he, as a close and intimate friend of the late Mr. Tata, placed before the assembly a brief idea as to what sort of a man that gentleman really was. Within the last few years a good deal had been said as to his high character and great personal worth, his valuable work for the industrial development of India, and his splendid provision for technical and scientific education. But he (the speaker) ventured to say that this was only an imperfect presentment of the many-sided activities of the late Mr. Tata and did not do justice in an adequate measure to his true greatness. To apprise at its true and full value the life-work as the man, they must look to the equipment with which he started in public life and which moulded his character throughout. The foundations of his high moral purposes and his philanthropic public spirit were laid deep in the literary or as he (the speaker) would prefer to call it by its old-fashioned name, liberal education—that English education which had commenced to be given in the later forties of the

last century and which was one of the most precious gifts bestowed by British rule on this country. This gift of English education was one of those things which were twice blest—it blessed him that gave and blessed him that took. This education was the precursor of all sorts of progress in this country, social, intellectual, educational, moral and political, and of the many emiment men who were the products of that education, Bombay owed a large number to the ' Elphinstone Institute,' founded to commemorate the far-sighted, sagacious and liberal statesmanship of Mountstuart Elphinstone—one of the wisest and best Governors of this Presidency, whose memory they so fondly cherished and venerated even now. The late Mr. Tata was also the product of that education, which he received in this institution, and they would find that the principles which he acquired then were the same that guided his whole life. There was a notion current that Mr. Tata took no part in public life and did not help political movements. This was a complete mistake. For though he could never be induced to speak from a public platform, the help and co-operation which he intended to all beneficial public and political movements ceased only with his life. The speaker instanced the case of the leading political association, the Presidency Association, of which the late Mr. Tata was a foundation member, and to join which he also

induced his old father. It was another mistake to suppose that the late Mr. Tata held aloof from the Indian National Congress. He was a Congressman to the end of his life and his friends highly valued his advice given consistently and constantly.

Sir Pherozeshah next proceeded to refer to the commercial morality of the late Mr. Tata. When he founded that colossal industrial enterprise—he meant the Central India Spinning and Weaving Mills—he refused to follow the prevalent pernicious system of agents charging commission on the a mount of the product, and said the agents should only charge their commission for the actual work of management done by them. A complaint had been made as to the iniquity of the excise duty in India, but the late Mr. Tata believed that the question of the prosperity of their mills would depend on working them honestly and the results had justified his prophecy. The speaker next dwelt upon the large-hearted and thoughtful philanthropy of Mr. Tata, who made a provision to send young men to study in England and other countries. As Sir Lawrence Jenkins had truly observed, the great industrial enterprises of the late Mr. Tata were launched not merely for the purpose of making money, for he could have invested his money in mo re profitable jobs, but for the advancement of that high moral purpose which guided his whole life

and which was to show his countrymen the way to industrial advancement. He brooked no distinction of caste, religion or community. His whole mind was set on doing things which would advance his country and redound to its credit. The late Mr. Tata used to point out the hollowness and the imperfectness of the adage that charity begin at home. He always insisted that though it might begin at home, charity should not end at home. As Lord Lamingtou had once justly pointed out, nobody would have retreated from the notion of a statue more than Mr. Tata himself. But the statue which was to be unveiled that afternoon was raised not only for the purpose of honouring the memory of Mr. Tata, but also to serve as a beacon light to successive generations of his countrymen to follow in his footsteps. This was the meaning and the significance of the statue which he (the speaker) requested His Excellency to unveil that afternoon. (Loud Applause.)

His Excellency then unveiled the statue amid applause.

His Excellency then addressing the assembly said:—Ladies and Gentlemen,—More than seven years have passed since a great public meeting was held in the Town Hall to initiate the measures necessary for the erection of a suitable memorial to the life and work of Mr. Jamsetji Nusservanjee

Tata. It was in all respects a notable gathering of Bombay citizens, and the excellent speeches made on the occasion show how deeply the death of Mr. Tata was felt and how keen was the appreciation of his fine character and his unique services to India. Some of those who were present have passed across the bourne; others are no longer in this country, but many are here present who well remember the sterling tributes which speakers paid to the memory of Mr. Tata, and they will rejoice that at length the unanimous wish of the people of Bombay has been carried into effect. If the interval seems long, we may remember that longer periods are not unknown in connection with public memorials, and it happens that we have met together at a time when Mr. Tata's three greatest schemes for the benefit of India are beginning to bear fruit. The first production of steel at the magnificently equipped works at Sakchi has been effected, and I am informed that while slightly lower in carbon than the Government specifications demand it is remarkably free from sulphur and phosphorous. In other words, the manufacture of steel of the best quality from Indian ore is now assured, and the economic success of this great Indian industry is a question only of trained labour and scientific direction. The first sessions of the fine Institute of Science at Bangalore commenced in July last. The

work on the grand hydro-electric project, which I hope to see on Saturday, is advancing rapidly and smoothy towards completion. We may, therefore, feel that we are commemorating the great achievements of Mr. Tata just at the time when they have passed into a stage of successful accomplishment.

For myself, I have come here with the great disadvantage that I never had the honour of meeting the man in whose aims I should have taken special interest and whose fine qualities would have specially appealed to me. Yet, in the curious complexity of human affairs, it happened to me to be able to give assistance to one of Mr. Tata's most cherished projects at what proved to be the psychological moment. I shall always be glad to think that the chance came to further the objects of the man whose memory I revere in a direction leading to immense direct and indirect advantages to the city of Bombay which he loved and which I have tried to serve. We all know the type of mind which is rich in ideas, but is quite incapable of the severe labour and thought required to examine dry details, to separate the practical from the visionary, and to lay down in concrete from the line of action upon which all great undertakings depend for success. There is another type which prides itself upon being pre-eminently practical, but is unable to conceive a great idea and is constitutionally afraid of large undertakings. We

occasionally come across a third type which is never tired of preaching progress as an abstract proposition, but will obstruct or delay every definite line of action leading to advancement. To such minds, decisions are odious and in the indefinite protraction of discussions they find their chief recreation. Mr. Tata was the very antithesis of all these types. In him the scientific use of the imagination was happily combined with an infinite power of taking trouble, which is not too common in India. Such a combination implies genius, and no one who attempts to follow the work which Mr. Tata accomplished will deny him that rare attribute. I suppose that the dominating and inspiring motive of his life was the development of home industries. His imagination showed him an India possessing large natural resources. He believed that his countrymen were capable of turning those resources to full account if they possessed the necessary training, and he conceived the noble idea of a great Central Institute of Research which would give to Indian students the opportunities now accessible to their Western rivals. The idea may seem a simple and a natural one; but, before it could be realized, a very large amount of investigation had to be carried out and Mr. Tata bestowed infinite care in collecting facts and experience of the nature required. The Bangalore Institute is therefore the product of much study

on which many minds have been brought to bear and is for that reason starting its career with bright promise of success. Many people have thought that a great steel industry was possible in India; but to create such an industry was a gigantic task. Mr. Tata set experts to work for some years to ascertain the quality of the various iron ores and their suitability for steel-making. He travelled in America and made himself acquainted with the great steel enterprises which were then rapidly developing. Unfortunately he passed away before his project assumed definite form, but his sons have brought it to the practical stage exactly in the spirit which he would have shown, utilizing the best brains avaliable and sparing nothing to make the plant the most modern and complete that could be obtained. I imagine that the opening of the Empress Mill at Nagpur on the 1st of January, 1877, in the thirty-eighth year of Mr. Tata's Life, was the beginning of a new period in his career, marking him out emphatically as a real reader of Indian Industries. He held strong views as to mill management, and before embarking on this important venture he made careful studies in Lancashire which provided him with expert knowledge. Thus equipped, he returned to India to make prolonged enquiries as to the best site for his model mills. The result of all his hard and patient work was that the Empress Mills have not

only set an example of consideration for employees, but can claim to have made profits, exceeding twelve times the original capital, in 26 years. I am not able to say whether this constitutes a record; but it seems to me to be a marvellous achievement, and it was due to the painstaking preparations, the personal attention to details and the acquired expert knowledge which Mr. Tata brought to bear upon his great enterprise. I regret that all that I can say of Mr. Tata lacks the personal touch. I have formed a conception of him, alike as a consummate man of action and as a private citizen, which convinces me that I should have found in him one with whose aims and qualities of heart I should have been in special sympathy. The words spoken at the public meeting of which this gathering is the fruition convey the impression of one well qualified to judge. Sir Lawrence Jenkins said of Mr. Tata: "In his private life he was the sincerest of friends, while his wide experiences made him the most delightful of companions. His own career was one of marked success, and that success was not the mere outcome of fortune's favour, but the symbol of his own qualities, his clear vision, his constancy of purpose, his uprightness and his vigour. Wealth came to him in full measure, but he remained to the last what he was by nature, a simple modest gentleman, seeking neither title nor place, and loving with a love

that knew no bounds the country that gave him birth."

Surely the life of such a man should be written for the help and encouragement of young Indians. How many lessons which are much needed it could teach them. Thoroughness in all things, great and small was its watch-word, and the main cause of its extraordinary success. Practical patriotism was its inspiration. Mr. Tata could speak with a breadth of view which amazed his Western friends, because he was fortified by patient study and knew well what he was talking about. He was quick to detect ignorance veiled by words in others, and he showed the clearest judgment in selecting the men he needed to further his enterprises. While his imagination may have borrowed something from his Eastern descent he possessed the Western faculty of analysing hard facts and appreciating their bearing upon his many schemes. Having decided after patient enquiry, he became at once the man of action, pursuing his objects with untiring energy. India in the past has produced men distinguished in many branches of human activity; but the application of the spirit of the West to meet the needs of the East has found no greater exponent than Mr. Tata. The memorial which I have the honour to unveil will recall to future generations the life work of one of whom the Parsi community, the Bombay Presidency and all

India may be justly proud. It will enshrine for the youth of India, the great example of real patriot and it will, I earnestly hope, inspire others to the careful study, the thoroughness, the directness of purpose and the sterling uprightness of life and conduct which enabled Mr. Jamsetji Tata to confer lasting benefits on the country which he loved.

Sir DORAB TATA, proposing a hearty vote of thanks to His Excellency, said, when Sir George Clarke was appointed Governor they learnt that His Excellency had been specially selected for the post and that to take up that post he had to give up the work which he had been doing in England and for which he was so eminently fitted. The results had shown that the hopes which they had entertained then had been more than fulfilled. Those who had watched the strenuous work done by His Excellency would realise what sort of a man they had got to guide the destinies of the people of this presidency. While former Governors and even members of the Executive Council preferred to do their work in cooler climates at this season of the year, his Excellency chose to do it in Bombay, as was evidenced by the functions presided over by him this week. Referring to Sir Pherozeshah's remarks about the late Mr. Tata, Sir Dorab said his father was first and foremost a man of action. That was the keynote of the late Mr. Tata's character. When the question of holding

the Civil Service Examinations simultaneously in India and England was being discussed some years ago, Mr. Tata made no speeches, but conceived the idea of sending capable young men to study in England and to compete for that and other examinations, with the result that more than sixteen of such men had been able to join the Indian Civil Service. He (the speaker) deeply regretted that the Tata Institute of Science to which references had been made, that afternoon, was not placed in Bombay. But he was sure that if his father had been alive at the time and His Excellency had been in Bombay, it would never have gone to Bangalore. The chief reasons for placing the Institute in Bangalore were climatic conditions and the donation made by the Mysore Government. He was glad to say that the Government of Bombay had recently contributed two lakhs of rupees to the endowment fund of the Institute. He proposed a hearty vote of thanks to their Excellencies.

The vote was carried with acclamation and their Excellencies were garlanded before their departure.

THE

TATA IRON & STEEL COMPANY,

LIMITED.

DIRECTORS' REPORT FOR 1913-14.

The Directors beg to lay before you their Eigth Report together with the Audited Statement of Accounts for the year ending 30th June 1914.

REVENUE.

The Company's net profit during the year ending 30th June 1914, amounted to Rs. 22,63,779-12-3 which with the sum of Rs. 71,298-8-10 brought forward from the last year's account, makes a total sum of Rs. 23, 35,078-5-1. Out of this, the sum of Rs. 1,52,039-5-4 which was received as premium on shares sold during the year has been carried to the Reserve Fund Account.

The following sums amounting to Rs. 8,62,982-12-4 have been appropriated from the profit :—

To Depreciation Fund Account	Rs.	3,50,000	0	0
„ Repairs and Renewals Account	„	4,32,982	12	4
„ Furniture and Preliminary Expenses Account	„	80,000	0	0

After making all these deductions, there remains a balance of profit of Rs. 13,20,056-3-5 out of which

the Directors recommend a dividend on Preference Shares for the twelve months ending 30th June 1914 at the rate of Rs. 8-12-3 nett per share, that is, at six per cent. per annum less income-tax. This will amount to Rs. 3,40,248-0-4 and out of the balance of Rs. 9,79,808-3-1 the Directors recommend that Rs. 4-8-0 per share be paid as a Dividend at the rate of 6% per annum on the Ordinary Shares, *viz.*, Rs. 8,97,115-8-0, leaving a balance of Rs. 82,692-11-1 which amount they recommend should be carried forward.

In the monthly cost sheets for the production of steel ingots, a certain amount is set aside every month for ingot moulds and stools used in the operation. Similarly, in the cost sheets for rails and structural materials a certain amount is set aside every month for providing for the cost of rolls used in the operation. These funds having accumulated during the past years, a sum of Rs. 2,51,262-6-1 has been written off from "Ingot Moulds and Stools account" so that the value of the ingot moulds and stools in stock may be kept down at a low figure. Similarly, out of the amount accumulated under "the Rolls Fund," a sum of Rs. 1,69,758-3-2 has been written off to keep down the stock value of rolls on hand. The effect of such writing down is that whereas we have got a stock of serviceable ingot moulds and stools worth a good deal, for the purpose

of valuation of stores on hand the average price of the materials works out at a very low figure and similarly in the case of rolls whereas the stock of rolls on hand are worth more, the value taken for stores purposes is low comparatively.

GENERAL.

Our Consulting Engineer's Report which is appended below gives details of the working of the Plant during the year. As stated in the last Report, arrangements have been made for the erection of Bye-Product Recovery Coke Ovens for the production of additional coke, and for certain very necessary additions and alterations in some departments of the Works. The work on the Bye-Product Recovery Ovens is progressing satisfactorily.

It was stated in the last Report that Mr. Perin, the Consulting Engineer of the Company, was expected to arrive in India during the cold weather of last year. Mr. Perin arrived at the end of November with Mr. Watson to advise and assist in the Open Hearth Steel Manufacture, and Mr. Judd, Mining Engineer, who had been with the Company before, to assist in the further development of the workings in the Raw Material Mines of the Company. The presence of these gentlemen at the Works helped materially towards better working and the improvements suggested by them have been carried out. Mr. Perin's stay in India, however, had to be shortened owing to

the lamentable death on the 7th March, in Bombay, of Mrs. Perin who had accompanied her husband to this country, and your Directors would like to place on record here their deep sense of sympathy with Mr. Perin in his bereavement. Mrs. Perin evinced great interest in the work which her husband had taken up with the Company and it was due to her courage and unselfish devotion that he made up his mind to come out to India in spite of her serious illness.

Improvements were effected in the quality and output of steel during the year under Report. Owing to such improvement, it is gratifying to say that the Government contract for rails is, in a large measure, completed for the current financial year, and it is fully hoped that the balance of the contract will be satisfactorily fulfilled.

Mr. Perin left India at the end of March last, and in June, accompanied by Mr. Padsha of the Agents' Firm, started on a tour of investigation of the markets of the West Coast of the United States of America, China, Japan and the Philippines with a view to introduce the company's products in those Markets and to establish satisfactory business connections there. It is gratifying to be able to say that the visits are likely to be productive of much advantage to the Company later on although owing to the unsatisfactory political and other conditions preval-

ing in Europe and in the Far East at the present time, no great direct results have been achieved so far.

The Directors regret that the Company has lost the services of Mr. A. E. Woolsey who was promoted to the General Managership when Mr. R. G. Wells retired from that appointment last year. A suitable successor has just been appointed and will arrive in India in a few weeks time; in the meanwhile Mr. Perin having returned from America in the middle of September, has taken charge of the Works at Sakchi with the assistance of Mr. Judd who has all along remained at the Works.

Owing to the out-break of War between Great Britain and Germany, it was at first feared that the German crew employed at the Steel Works of the Company at Sakchi, would leave their posts to return to their country. Owing to a combination of circumstances, however, it has been possible to retain the entire German crew at the Works. Your Directors take this opportunity of placing on record their grateful thanks to the Local Governments and to the Government of India for permitting the continuance of the services of the German crew and for the special police and other arrangements which they have been so good as to make to prevent any undesirable incidents at the Works.

Our Consulting Engineer Reports as follows:—

EXPLORATION.

During the past year Exploration work has been carried on in various parts of India in charge of the Consulting Engineer with the view of making your Company independent of European supplies.

An area containing Magnesite and Chromite in Mysore State has been taken up and it is anticipated that we shall be able to have Magnesite bricks for the Open Hearth Steel Furnaces manufactured in India.

Exploration has been carried on in the region of the proposed extension of the B.-N. Railway with the result that an additional area of Iron Ore has been discovered. In addition to the taking up of a new area of Iron Ore, the Company is preparing to investigate a new Coal area.

Should these two new properties fulfil expectations, they will constitute a material addition to your reserves of raw material.

An Engineering party has been engaged during the year in the completion of the Mourbhanj Iron Ore surveys and in a calculation of the tonnage available in the first three deposits owned by the Company. Additional test pits have been sunk and revised figures at Gurumaishini alone indicate the existence of 50% more Iron Ore than was originally calculated.

Between three and four hundred tons of Fluorspar are used annually in the manufacture of steel. Heretofore this material has come from Europe. We are now investigating deposits in Rajputana which give promise of supplying our requirements of this material.

FIRE-BRICKS.

The annual consumption of fire-bricks imported from Europe has been approximately 1½ million. Efforts have been directed to increase the consumption of local bricks and decrease imported bricks. Quite recently we have secured favourable prices from Japan on Silica bricks and are hopeful of material economy in this direction.

Deposits of Fire-clay and of Silica have been examined and analysed with the view of assisting local manufacturers in making the desired quality. It is probable that in the near future your Company will enter into the manufacture of their own fire-bricks.

We are preparing to utilize Blast Furnance Slag, a waste product, in the manufacture of Slag-bricks by mixing granulated slag with lime. These bricks are estimated to cost about half of the present price of red brick and can be used for all ordinary purposes.

The utilization of another bye-product of the

Company has been under investigation, *viz.*, the Basic Slag of the Open Hearth Furnaces.

Owing to the low percentage of Phosphorus in our Pig Iron our Basic Slags do not contain the usual high percentage of Phosphorus but they do contain enough to be of some value as a fertilizer when properly ground and prepared for the soil.

The Plant has been maintained in a state of efficiency and proper sinking funds are being charged against each product to enable us to maintain it in proper repair.

During the year, your Directors visited the Plant at Sakchi and while there authorised improvements by which economies in production as well as increased tonnage in Steel Mills are anticipated.

COKE OVENS.

Your Company's original installation was that of 180 Coppee non-recovery retort Ovens. Our Blast Furnaces are exceeding their anticipated tonnage and are requiring more Coke. We have added to our Coke Plant 60 Drag Coke Ovens and while this addition to our capacity has been of value, yet we have a great need for the bye-product resulting from the operation of the manufacture of Coke. We are buying Tar and Gas Coal to make Gas. These two elements we can secure from the new Plant without cost other than for the Plant.

The Coke market has during the past two years

offered considerable profit and we have not been in a position to take advantage of it. Under the proposed plan of new Ovens, we shall add to our Coke capacity about 1,06,000 tons per annum and be in a position to increase our production of Pig Iron and also sell Coke in the open market; our present Coke capacity being 196,000 tons.

KOPPER OVENS:—Your Company has entered into a contract with the Koppers' Coke Ovens and Bye-Product Company of 301 Glosset Road, Sheffield, England, by which they have to supply and erect at the Sakchi Iron Works a complete Coke Oven Plant consisting of 50 Koppers' Patent Regenerative Coke Ovens with Bye-Product Plant for the recovery of Tar and Gas and the manufacture of Sulphate of Ammonia. The Contractors have agreed to supply f. o. b. European ports the bulk of the materials and Plant required for the construction of these Ovens.

The Plant is to be arranged so that an additional battery of 50 Ovens can be subsequently erected continuous to the New Ovens, or so that the existing Ovens can be converted into Koppers' Waste Heat or Regenerative Ovens without interfering with the working of the new or the old Plant. The Bye-Product Plant is furthermore to be arranged for subsequent duplication, so that the machinery and apparatus for dealing with the gases from a 2nd bat-

tery of 50 Ovens can be erected without interfering with the first section.

GUARANTEE:—The Contractors guarantee the design, material and workmanship for the whole of the material and Plant shipped from Europe for one year from the date of completion. The Contractors guarantee quantities of Tar and Sulphate of Ammonia to be recovered from the Plant.

COAL.

Your Bhelatand Colliery has raised during the last fiscal year about 44,500 tons of coal out of which it has furnished 4,270 tons steam coal and a portion of the gas coal required for operation at Sakchi Works. The balance has been sold in the open market. The maximum monthly raising was 5,260 tons; the average monthly raising was 3,700 tons.

The development of your Malkera-Choitodih Colliery is proceeding satisfactorily, and the hope expressed in the last report is being realised and coal from this new colliery is also being supplied to the Works at Sakchi.

Coal received from outside sources excluding Bhelatand and Malkera-Choitodih Collieries was during the fiscal year 3,70,100 tons.

The consumption of coal by the Coke Ovens was 2,80,810 tons; by the Gas Producer 64,520 tons; by Boilers and Locomotives 24,400 tons.

IRON ORE.

Gurumaishini mine has despatched to Sakchi during the first half year 1,05,075 tons and during the second half year 1,50,165 tons, making a total despatch of 2,55,340 tons; out of which 2,36,521 tons were consumed by the Blast Furnaces and Steel Works and the balance of 18,819 tons was added to stock.

About 4,250 tons of Gurumaishini Ore were sold in the open market.

Our Lohara mines have railed us about 17,420 tons of Chanda Ore, of which 7,170 tons have been used by the Steel Works and the balance is in stock.

DOLOMITE.

Your Panposh quarries have shipped during the fiscal year 98,440 tons of Dolomite out of which 43,220 tons were railed during the first half year and 54,730 during the second half year making a total shipment to Sakchi of 97,950 tons. The consumption of Dolomite by the Works was 87,470 tons, and the balance, 10,480 tons was added to last year's stock.

LIMESTONE.

Our Jukehi quarry has remained closed during the entire year, limestone being purchased from Kutni from which point we have a lower rate of freight. The consumption of limestone at the Works during the year was about 8,050 tons.

MANGANESE.

The shipment of Manganese Ore to Sakchi Works from Balaghat during the fiscal year was 9,920 tons. The consumption of Manganese Ore by our Works was, 6,900 tons, and the balance was put in stock. During the year under review the mines have been opened out considerably. The two sidings of Ramrama and Shoedin Hurki were completed during the year and will be of great service in the shipment of ore.

LABOUR.

The daily average number of employees was :—

during the 1st half year—9.507 } Men and
during the 2nd half year—7,642 } Women.

The number of European covenanted hands is 135, and the number of local European employes is 50. The balance of the labour is Indian.

In addition to the labour employed at Sakchi mentioned above, your Company gives employment to approximately 2,200 labourers at Gurumaishini; 1,900 at Panposh; 1,000 at Choitodih and Bhelatand.

SALES.

During the past year there has been very great depression in both European and American Markets, but more particularly has this been the case in Japan which is one of our largest consumers of Pig Iron. The price of Pig Iron was fair at the com-

mencement of the year, but constantly dropped until November reaching its low point and practically keeping at this level until the end of the fiscal year.

We have added Scotland, Italy, and the Philippine Islands to the list of countries to which our products are being shipped. We are supplying rails and fishplates to the Great Indian Peninsula Railway, the Bombay Baroda and Central India Railway, the Bengal-Nagpur Railway, the North-Western Railway, the Oudh and Rohilkhand Railway, the Eastern Bengal State Railway, the Assam Bengal Railway, the Baroda State Railway, the Bhavnagar State Railway and the Sara-Serajgunge Railway, besides shipping other products such as structural, spring, tool and octagon steel. We are rolling Rails from 18 lbs. to 100 lbs. per yard. As a result of the depression and want of freight, our stocks of Pig Iron have increased but at the moment we have orders on hand to keep both our Bar Mill and Rolling Mill busy up to the end of the calendar year.

TOWN.

Addition to Town Buildings were during the fiscal year:—

1. Extension of General Manager's Bungalow.
2. Out-houses and Cook Room for the Institute.
3. Post and Telegraph Office Building.
4. Court House.

5. Physical Laboratory.
6. Police Thana Building.

The last three are under construction. Out of these, the 3rd, 4th and 6th mentioned buildings were paid for by Government.

The total expenditure on Town Buildings during the fiscal year was Rs. 78,000.

A Primary School for the children of the employees is maintained by the Company with Government grant-in-aid and the question of raising it to a higher status is under consideration.

PLANT.

Sanctions for the following additions made to Plant were given during the year :—

1. Blooming Mill Extension.
2. Charging Boxes and Wagons.
3. Ferro Manganese Shed.
4. Rail Inspection Shed.
5. Rail Mill Extension.
6. Smith Shop Extension.
7. Drag Ovens.
8. Foundry Extension.
9. Cooling Beds.

Sanctions obtained during the year for additions to be made to the Plant :—

1. Additional Stack for Coke Ovens.
2. Magnet Crane for Blast Furnaces.
3. Locomotive Crane for slag dump.

4. Casting supports for cooling beds.
5. Koppers' Bye-Product Coke Ovens.
6. Bar Mill Extension.
7. Screw cutting Lathes.
8. Gear cutting Machine.
9. Broad gauge Locomotive.
10. Charging Crane.
11. Slag Ladles and Trucks.
12. Wood circular Saw.
13. Rail Drills.

MEDICAL REPORT.

The total number of new cases treated from 1st July 1913 to 30th June 1914	... 26,925
Total number of old cases treated from 1st July 1913 to 30th June 1914 ...	... 80,655
Total number of cases treated	... 107,580

Of these about 45 per cent. are not employed on our Works.

Total number of In-door patients treated from 1st July 1913 to 30th June 1914	... 140
Total number of operations performed during the year	... 1,131
Of these 19 were major.	
Total number of deaths during the year	... 40

Of these 18 were due to accidents on our Works.

The health of the town is good. There has been no epidemic of any kind.

MISCELLANEOUS.

During the year under Report, Mr. R. D. Tata was appointed a Director in place of His Highness the Thakore Saheb of Morvi, whose seat fell vacant last year. Mr. R. D. Tata's appointment will have to be confirmed by the Shareholders.

In accordance with Article 106 of the Company's Articles of Association, two of your Directors, namely, Sir Cowasjee Jehanghir, Bart., and Mr. C. V. Mehta retire by rotation but are eligible for re-election.

In April last, the Honorary Secretary of the J. N. Tata Memorial Fund offered as a present to the Company a bronze bust of the late Mr. Jamsetji N. Tata. Your Directors accepted the offer with thanks and resolved that, with the sanction of the Shareholders, a sum of Rs. 3,000 be subscribed to the J. N. Tata Memorial Fund. As such action on the part of the Shareholders would seem to be appropriate, the proposal is commended to your favourable consideration.

The Shareholders will be requested to elect their Auditors for the current year and to fix their remuneration.

D. J. TATA,

Bombay, 9th October 1914. *Chairman.*

TATA HYDRO-ELECTRIC POWER SUPPLY COMPANY, LTD.

INAUGURATION CEREMONY.

8th February 1915.

SIR DORAB TATA'S SPEECH.

Sir Dorab Tata, in opening the proceedings said :—Your Excellencies, Ladies and Gentlemen,

In thanking his Excellency the Governor and Lady Willingdon for making the time to be present to-day amid strenuous activities which command the admiration and gratitude of the whole Presidency, may I say that it is peculiarly fitting that the Head of this Government should thus be identified with the culminating phases of this enterprise. For, from its inception it has enjoyed the warmest and most helpful support of successive Governors and Governments. When it was in the incubation stage Lord Lamington extended to it active sympathy and cordial aid. During the critical days which marked the actual flotation of the company, Lord Sydenham was its staunch and powerful friend. Even before you sailed for India, you, Sir, were so good as to pledge your support in advance, and that pledge has been more than redeemed ; you made yourself personally acquainted with the works in the burning heat of an April sun, and have ever since stood to it

in the light of a benevolent foster parent. Nor has this valued assistance been confined to Governors, for all officials with whom we have had to deal have assisted the operations of the Company to the utmost of their capacity. We sometimes hear complaints that the Government in India are lukewarm towards industrial development and indifferent to commercial enterprise. The history of this scheme is living proof to the contrary, for it has continuously enjoyed the most ungrudging official support, which is sealed by the gracious presence of your Excellencies this afternoon.

We are to-day witnessing the first fruits of many years of elaborate and costly investigation and four years great constructional activity, and, you will, I hope, pardon a feeling of pride that I stand here to-day, as I do, to announce the completion of the first stage of this scheme, which at its inception seemed too colossal for private enterprise in India. I do not propose to deal here with the early history of this project, as enough was said by me on the occasion of the laying of the Foundation Stone exactly four years ago. Looking back on the vicissitudes through which the project has passed—vicissitudes so great that we almost despaired of seeing the completion of the scheme—we can now realise that the delays that occurred were not wholly unprofitable. For, they enabled us

to realise an ideal that would have seemed chimerical in my father's day—the financing of the complete scheme with Indian capital and its execution under an Indian Board of Directors. This ensures that the management of the Company shall be in the closest harmony with local conditions and requirements, and that the profits which we hope to earn shall benefit the people of this country. Four years to a day have elapsed since the Foundation Stone of the dam at Lonavla was laid, and to many people no doubt that seems a long time to wait for the advent of current in Bombay. But if you look at the magnitude of the works, you will agree that whilst no doubt all of us should have been glad to see the current switched on a year ago, in the peculiar conditions under which we have had to work that period is not excessive. For, we have had no great perennial river which had merely to be diverted to the turbines, or region of continuous rainfall which, as in the Highlands of Scotland, permits the storage of a sufficient body of water with small dams. We have, it is true, on the Western Ghauts perhaps the heaviest rainfall in the world, but it falls in 90 days; and the problem was to store the rainfall of three months in such quantity that it would meet our requirements for a year, and it must be admitted on all hands that the work has been carried out most admirably by our Hydraulic

Engineer. What that involved is apparent from a few comparisons; the great dam at Shirawata is larger than the Assouan Barrage, which on its completion was hailed as one of the engineering wonders of the world, and the Walwhan dam is little inferior in size to Sir William Willcock's great work on the Nile. I have warrant for saying that in no other Hydraulic Scheme has storage on such a gigantic scale been attempted. Then whilst the great fall of 1734 feet from the forebay to the turbines is one of the distinguishing features of the scheme, because it permits an exceptional economy of water, it brought great engineering difficulties in its train; we shall ultimately pass through our pipes a quantity of water equal to the flow of the Thames for seven months of the year, and by the time they reach the Power House these pipes resist a pressure of 750 pounds to the square inch. But if I would convey to you an adequate appreciation of the magnitude of the works, could I do better than say *circumspice*? The building in which we are met, with all its elaborate mechanism, is demanded merely to receive the current as it is transmitted at 100,000 volts, transform it down to 6,500 volts and distribute it to the mills.

If it be permitted, I should like to say a few words in reference to the spirit which animated those who conceived and executed these works.

This is primarily an industrial enterprise: we hope that it will earn substantial profits for the shareholders. But it is something more than a money-making concern. To my father the Hydro-Electric project was not merely a dividend-earning scheme; it was a means to an end—the development of the manufacturing power of Bombay. It is in that spirit that we have carried out the fruitful ideas he bequeathed to us, and it is in that spirit that we have received the far-sighted financial support which made possible the construction of the works. As a business proposition pure and simple we could not have asked for, and certainly we should not have received, the financial backing, especially from the progressive Native States, which has now fructified; the great sums of money needed were forthcoming mainly because those who commanded them believed that the scheme would assuredly play an important part in the industrial renaissance of India which is of paramount importance to the whole future of the country. The capital invested by Native States in this and other enterprises in British India is very remarkable evidence of their confidence in the deep-rooted stability of the Raj, whose cause they are so nobly supporting by their full participation in this Imperial War. I am sure we all most cordially welcome the advent of the Native States in our industrial and commercial life, which not only

stimulates our progress but materially increases their stake in the ordered progress of this country. The experience gained since the Foundation Stone was laid has confirmed us in the conviction that the provision of cheap electrical energy will not only be of enormous advantage to the staple textile industry of Bombay, but that it will render easy the extension of that industry and the establishment of new industries both in the island and along the route of the transmission line, and that by abolishing smoke it will improve the hygienic conditions of the city. More: we are very hopeful that the investigations now being made by Government will permit the full sized river which emerges from the turbines to be utilized for the purposes of irrigation and so increase the productiveness of land whose crops will find a ready market in Bombay.

Before asking your Excellency to switch on the current, I would take this opportunity of expressing the gratitude we all owe to those who have laboured so strenuously to bring this project to fruition. Our Consulting Engineer, Mr. Alfred Dickinson, brought to the task not only the great professional skill which has been exercised in many parts of the world, but a robust and unfailing confidence which has been of incalculable assurance to us in the anxious and sometimes depressing days through which we have passed. In Mr. R. B. Joyner, who

has designed and supervised the construction of the whole of the hydraulic work—work which I believe surpasses anything found elsewhere in this land, where we are used to the taming of rivers and the conservation of waste waters—we were fortunate in finding an engineer whose long experience in the service of Government was linked with an unconquerable energy and imagination which advancing years could not wither. For, as I have already said on a former occasion the entire credit for designing the whole of the hydraulic work belongs to him alone. Mr. H. P. Gibbs, the Resident Engineer, has brought to Bombay the valuable experience gained on the Cauvery, and technical knowledge of the highest order, which we hope will be of great service to us in future. Associated with these engineers there has been a staff of enthusiastic and devoted assistants and contractors, to one and all of whom I would tender our grateful thanks. And now your Excellency, I ask you on behalf of the Tata Hydro-Electric Power Supply Company, to pull the switch which will free the energy generated forty-three miles from here, from water brought by the last monsoon and stored on the Ghauts, for service in the mills of Bombay. I do so with the full assurance that you may find some compensation for the demands which this little ceremony has made on your busy hours, in the knowledge that you are

inaugurating a scheme which will materially benefit a cause which you have very much at heart—and which receives your unfailing sympathy—the industrial progress of Western India and the improvement of the economic and social condition of its people. Our best thanks are also due to her Excellency Lady Willingdon for gracing this occasion with her presence at great personal inconvenience. But all of us who have for the last two years been witnesses of her manifold activities and her hearty participation in all good work are not surprised to find that public duty ever stands with her before personal comforts. As was happily said on a very recent occasion a spirit of service and sacrifice animates both their Excellencies Lord and Lady Willingdon in promoting the welfare of Bombay.

H. E. Lord Willingdon after turning the switch of the Tata Hydro Electric Power supply said :—

Sir Dorab Tata, Ladies and Gentlemen,

This ceremony which I have just had the pleasure of performing, of starting the supply of electrical energy for the mills of Bombay marks another great step forward in the progress and advancement of our city's industrial life, and I need hardly tell you what a keen satisfaction it gives me to be present amongst you in my official capacity and to wish God-speed to this great undertaking at the outset of its useful and I hope profitable career.

R. JAYAKAR
MALABAR HILL
BOMBAY

I assure you, I still have a keen recollection of the interest and exhaustion I felt on that warm April day nearly 2 years ago which you have referred to when under your guidance I got my first impressions of this tremendous enterprise. To-day my duties are of a much less arduous character, for I am here to join with this great gathering in congratulating you as Chairman of the Board, your Directors, your Engineers and other Officers on the successful result of their strenuous labours, and to endorse every word that you have said in reference to the admirable services of particular individuals. After having had many opportunities of realising the manifold benefits of the conservation of water to this country, I can personally testify to the immense debt India owes to the skill and ability of the engineering profession. And I wish more particularly to recall to your minds the memory of that great Bombay citizen Mr. Jamsetjee Tata, the pioneer of Indian industrial enterprise, through whose initiative and courage this scheme was first brought into existence. It must indeed be a source of pride and satisfaction to you, Mr. Chairman, and to your brother to feel that to-day you have established in India another magnificent and permanent memorial to your father's great services to his country.

You have told us of the many vicissitudes through which this scheme has passed and of the triumph of

engineering skill which has finally surmounted all obstacles. And you have held out a vision of the benefits which will accrue to this city by having cheap electrical power brought into its midst. Let me quote from your own remarks. "The experience gained since the Foundation Stone was laid has confirmed us in the conviction that the provision of cheap electrical energy will not only be of enormous advantage to the staple textile industry of Bombay, but that it will render easy the extension of that industry and the establishment of new industries both in the island and along the routes of the transmission line, and that by abolishing smoke it will improve the hygienic conditions of the city. More: we are very hopeful that the investigations now being made by Government will permit the full sized river which emerges from the turbines to be utilizedfor the purposes of irrigation and so increase the productiveness of lands whose crops will find a ready market in Bombay." A vision indeed, but one which I trust and believe will come true, for I am a sincere and cordial believer in the prosperous development of this country.

You have already referred very rightly with some pride to the fact that this project is being managed by an Indian Board of Directors and is financed by Indian money, that it is in fact a Swadeshi enterprise. May I venture to suggest a broader point of view,

viz: that it is really an Imperial venture. For is it not true, that it is by the co-operation and joint efforts of Indians and English that this great work has been accomplished, and may I not hope that such co-operation and joint effort may in the future always be found, as in very truth it is at this moment in Europe, to promote the well-being of all parts of the Empire?

India, the home of the highest civilization in years gone by, is still young in ccmparison to other countries in its scientific and industrial development. But the reason for our meeting together to-day gives me confident hopes of your future. We must look to two matters of urgent importance in order to secure success. The one is the necessity of raising up amongst us a healthy and intelligent industrial population living in comfortable homes and healthy surroundings, and this can only be secured through the co-operation of Government, the local authorities and the employers of labour. It is difficult to exaggerate the importance of this joint responsibility, and I trust we shall work together to discharge it fully realising the present urgency of the problem and the necessity of anticipating in time the even greater requirements of the future.

The second point to which I would invite your attention is the need to rouse in our rising generation a spirit of real ambition to promote the prosperity of

India. And I cannot do better to-day than ask them one and all to take as an example and inspiration for their future lives the life work of Mr. Jamsetjee Tata. If they strenuously endeavour to emulate this example, I am full of hope that in the future we may produce many men in this country with brains, character and courage, whose work will stand high in their various professions in all parts of the world.

Mr. Chairman, I thank you sincerely in conclusion for your generous references to Lady Willingdon and myself. We have come to this country to do our best to help its people on the road to progress. We believe that the increasing prosperity of India will increase the strength and solidarity of our Empire. We ask of you all to give us the same support and encouragement in the future as you have done in the past to help us in our responsible task, and assure you that given health and strength we shall spare no endeavour to give our best services to your advancement and welfare.

SELECT OPINIONS.

The London Times writes on the 17th December 1914 :—* * * A hearty welcome is to be given to this brief outline of his character and achievements by a fellow citizen and fellow Parsi who belongs almost to the same generation, being only four years his junior and who has also brought lustre upon his college, the Elphinstone. As Lord Sydenham said in Bombay, it is important that the life of the greatest exponent of the application of the spirit of the West to meet the needs of the East should be written for the help and encouragement of young Indians. This inexpensive sketch is meant mainly for them and its enthusiastic luxuriance of phrase will inspire and impress them more deeply perhaps, than would a carefully balanced estimate.

The Times of India observes in a leading article :— * * * * The little brochure should be in the hands of every Indian student and school boy and pondered upon by all engaged on India's work for it enshrines both the spirit and the achievement of a great Indian and a true patriot.

The Bombay Chronicle writes in a leading article under the heading of "*A Great Example*" :—The whole life and work of J. N. Tata, his character, his energy and enterprise, his unconquerable determination to succed in whatever he undertook and above all the generous patriotism and far seeing philanthropy with which he applied the results of his own success to the advancement of his own country are a

lesson which should form part of the education of every Young Indian.

The Hindu writes in a leading article on the 5th December 1914 :—The appearance at the present time of a short biography of the late J. N. Tata written by his life long friend and admirer Mr. D. E. Wacha is peculiarly appropriate, for nowhere else could a more valuable example be found for what indomitable energy, great perseverance and practical philanthropy could achieve in the Industrial World. That lesson is necessary to be learnt as much by the Public as by the Government and the fascinating story narrated to us by Mr. Wacha furnishes valuable guidance on many other matters.

The Bengalee writes in a leading article on the 1st December 1914 :—The life of such a man is worth a hundred desertation on Patriotism. It is inspiring—it is calculated to rouse the desponding and to stimulate the ardour of the optimistic.

The West Coast Spectator writes on the 5th December 1914 :—Those who are interested in the material advancement of the country will do well to read the small book, the production of which ought to be regarded as a work of National importance.

The Mahratta, Poona, writes :—The theme of the life and life-work of the late Mr. J. N. Tata is full of edifying incidents and stimulating interest, even when stated in a bald form ; but it has become decidedly absorbing and inspiring in the hands of

Mr. D. E. Wacha who intimately knew the hero of his history in his various relations and for a long term of years.

The Indu Prakash, Bombay, writes.—" An exceedingly lively volume."

MR. G. SUBRAMANIA AIYAR writes in *The New India*, Madras:—The Veteran Publicist and Patriot of Bombay Mr. D. E. Wacha, has published at a very opportune moment an interesting and instructive biographical sketch of the late Mr. J. N. Tata.

The Tribune, Lahore, writes:— * * * So well has Mr. Wacha succeeded in this his labour of love and presents such a charming sketch of the life of the pioneer worker in the field of industrial development that we consider an enlargement in the present work cannot long be delayed.

The United India and Native States writes:—Business like philanthropy, whole hearted devotion to his mother-land, unostentatious simplicity, a ceaseless yearning for scientific knowledge, these marked the career of the late Mr. Tata and such qualities exhibited in his epoch making life and vividly disclosed in the excellent memoir which Mr. Wacha has offered as the result of his labour of love may well serve as a beacon-light to coming generations.

The Madras Mail writes:—The name of the late Mr. Jamsetjee Nusserwanjee Tata is one to conjure with in the Indian industrial world. Born amidst the most unpromising and depressing surrounding

he succeeded in becoming the architect of his own fortune, and achieved a great name and fame as a captain of industry. The industrial progress in India is attributable in no small degree to the initative and enterprise of Mr. Tata. The sketch of the career of this great son of India has been admirably written by Mr. D. E. Wacha, of Bombay, and the book which can be had from Messrs. Ganesh and Co. Madras, ought to attract a large circle of readers.

The Wealth of India writes:—It is most opportune that, just at this time when the whole India is awakening to the consciousness of the vastness of the economic resources of the country, a sketch of that great captain of Industry, Mr. J. N. Tata, should be published by Messrs. Ganesh & Co., Madras. This interesting biography is written by D. E Wacha, one of the intimate friends of Tata. * * * To all Indians, the life of the late Mr. Tata must always be an inspiring and ennobling example to follow.

The " Indian Emigrant," writes :—Messrs. Ganesh & Co. are well known throughout India and abroad, for the patriotic work they are undertaking by publishing biographies of eminent men of India. The recent volume of " the Life and Life Work of J. N. Tata" by D. E. Wacha is a welcome addition to the Indian Nation Builders Series published by them. We particularly recommend the book to the younger generation to whom it will serve as an inspiration for patient and patriotic work.